

APPENDIX A—MINERAL LEASING STIPULATIONS

A.1 STIPULATIONS APPLICABLE TO MINERAL LEASING

Table A-1 lists, by alternative, the stipulations for mineral leasing referred to throughout this document. The stipulations developed would apply to both oil and gas leasing and potash leasing. The stipulations also apply to geophysical exploration.

A.1.1 Description of Stipulations

The following tables show resources of concern and stipulations including exceptions, modifications, and waivers by alternative. Lands within the Planning Area have been designated as either: 1) open to mineral leasing subject to the standard lease terms and applicable laws, regulations, and orders, 2) open to mineral leasing subject to major constraints (no surface occupancy [NSO] stipulation), 3) open to mineral leasing subject to minor constraints/special stipulations (timing limitation [TL] and/or controlled surface use [CSU] stipulation), or 4) closed to mineral leasing.

- Areas identified with a CSU stipulation are open to mineral leasing, but identified resource values require special operation constraints.
- Areas identified with a TL stipulation are open to mineral leasing, but surface use during specified time periods is prohibited to protect identified resource values.
- Areas identified with a NSO stipulation are open to mineral leasing, but use or occupancy of the surface for exploration and mineral development is prohibited in order to protect identified resource values. The minerals under NSO lands may potentially be developed by directionally or horizontally drilling from nearby lands that do not have the NSO limitation.
- Areas open to mineral leasing are subject to existing laws, regulations, and formal orders; and the terms and conditions of the standard lease form.
- Standard terms and conditions for oil and gas leasing allow the Bureau of Land Management (BLM) to impose reasonable measures, such as modifying well siting or timing of operations to minimize resource impacts.
- Areas identified as closed are not open to mineral leasing. Although “closed” is not a leasing stipulation, closed areas are shown in Appendix A for the purpose of clarity and comparison. The purpose for the closure is also provided in Table A-1.

A.1.2 Exceptions, Modifications, and Waivers

Stipulations may be excepted, modified, or waived by the Authorized Officer. An exception is a one-time exemption for a particular site within a leasehold; exceptions are determined on a case-by-case basis; the stipulation continues to apply to all other sites within the leasehold. A modification is a change to the provisions of a lease stipulation, either temporarily or for the term of the lease. A waiver is a permanent exemption from a lease stipulation. The stipulation no longer applies within the leasehold. The environmental analysis document prepared for site-specific mineral proposals (i.e., APDs, sundry notices) also would need to address proposals to exempt, modify, or waive a surface stipulation.

General exception, modification, and waiver criteria have been developed that apply commonly to many lease stipulations. Table A-1 specifies where the general exceptions, modifications, and waivers apply. The general exceptions, modifications, and waivers are specified as follows:

Exception - The Authorized Officer may grant an exception to a stipulation if it is determined that the factors leading to its inclusion in the lease have changed sufficiently such that: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP, or 2) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination.

Modification - The Authorized Officer may modify a stipulation as a result of new information if: 1) the protection provided by the stipulation is no longer justified or necessary to meet resource objectives established in the Moab MLP, 2) the protection provided by the stipulation is no longer sufficient to meet resource objectives established in the Moab MLP, or 3) proposed operations would not cause unacceptable impacts. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The modification may be subject to public review for at least a 30-day period.

Waiver - The Authorized Officer may waive a stipulation if it is determined that the factors leading to its inclusion in the lease no longer exist. The Authorized Officer may require additional plans of development, surveys, mitigation proposals, or environmental analysis, and may be required to consult with other government agencies and/or the public in order to make this determination. The waiver may be subject to public review for at least a 30-day period.

Specific exceptions, modifications, and waivers have also been developed for some of the lease stipulations by alternative and are also provided in Table A-1.

A.2 MINERAL LEASE NOTICES

Table A-2 lists the mineral lease notices that would be applied within the Planning Area. A lease notice provides more detailed information concerning limitations that already exist in law, lease terms, regulations, or operational orders. A lease notice also addresses special items the lessee should consider when planning operations, but does not impose lease stipulations.

Table A-1. Mineral Leasing Stipulations Including Exceptions, Modifications, and Waivers

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
Air Quality and Greenhouse Gases	Planning Area	CSU	X	X	X	X	<p>All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower shall not emit more than 2 grams of NOx per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.</p> <p>All new and replacement internal combustion gas field engines of greater than 300 design-rated horsepower must not emit more than 1 gram of NOx per horsepower-hour.</p> <p>Purpose: To protect air quality and minimize greenhouse gas emissions.</p> <p>Exception: None</p> <p>Modification: The Authorized Officer may modify the stated requirements in accordance with updated specifications to comply with the Clean Air Act, or as deemed necessary to ensure that the stipulation is sufficient to maintain air quality and protect air quality related values.</p> <p>Waiver: None</p>
Air Quality	Planning Area	CSU		X	X	X	<p>All drilling and production operations are required to adhere to the following minimum standards:</p> <ol style="list-style-type: none"> 1. Drill rig engines must meet Tier II or better standards, as necessary based on air quality conditions or projections, and consistent with the most stringent EPA emissions standards that are in force at the time of installation or approval. 2. Stationary internal combustion engine standard of 2g NOx/bhp-hr for engines <300HP and 1g NOx/bhp-hr for engines >300 HP. 3. Low bleed or no bleed pneumatic controller. 4. Dehydrator VOC emission controls to +95 percent efficiency. 5. Tank VOC emission controls to +95 percent efficiency equivalent to NSPS subpart 0000. <p>Purpose: To mitigate any potential impact mineral development emissions may have on regional ozone formation.</p> <p>Exception: None</p> <p>Modification: General modification applies.</p> <p>Waiver: None</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
Air Quality	Planning Area	CSU		X	X	X	<p>A Fugitive Dust Control Plan would be required for mineral activities that would disturb a surface area larger than 0.25 acres or that would involve truck traffic on unpaved or untreated surfaces.</p> <p>Purpose: To minimize the generation of fugitive dust.</p> <p>Exception: None</p> <p>Modification: General modification applies.</p> <p>Waiver: None</p>
Cultural Resources	Specific Cultural Sites (22,328 acres)	NSO		X		X	<p>No surface occupancy is allowed for a 0.5 mile radius around the following cultural sites and cultural concentration areas listed below:</p> <ul style="list-style-type: none"> • Upper Indian Creek • Kane Creek Rock Art • Lower Kane Creek Rock Art • Levi Well Rock Art • Highway 279 • Seven Mile Canyon • Bartlett Rock Art • Trout Water Rock Art • Mill Canyon • Jug Rock • Dubinky Well • Upper Hell Roaring Canyon • Muleshoe Canyon. <p>Purpose: To protect the setting of heavily visited cultural sites and to prevent the introduction of visual, audible, or atmospheric conditions that are out of character with the site or its setting.</p> <p>Exception: The Authorized Officer may grant an exception if the project is not visible or audible from the cultural site or cultural concentration area.</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Cultural Resources	Specific Cultural Sites (45,289 acres)	NSO			X		<p>No surface occupancy is allowed within a 1 mile radius around the following cultural sites and cultural concentration areas listed below:</p> <ul style="list-style-type: none"> • Upper Indian Creek • Kane Creek Rock Art • Lower Kane Creek Rock Art • Levi Well Rock Art • Highway 279 • Seven Mile Canyon

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							<ul style="list-style-type: none"> • Bartlett Rock Art • Trout Water Rock Art • Mill Canyon • Jug Rock • Dubinky Well • Upper Hell Roaring Canyon • Muleshoe Canyon. <p>Purpose: To protect the setting of heavily visited cultural sites and to prevent the introduction of visual, audible, or atmospheric conditions that are out of character with the site or its setting.</p> <p>Exception: None</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Moab Canyon Utility Corridor	Highway 191 Utility Corridor within Moab Canyon (3,119 acres)	NSO	X				<p>No mineral activities would be allowed within the utility corridor other than those associated with utilities.</p> <p>Purpose: To prevent future surface use conflicts along Highway 191 and within the utility corridor.</p> <p>Exception: The Authorized Officer could grant an exception if it can be demonstrated that the action would not result in any surface use conflicts with utilities.</p> <p>Modification: None</p> <p>Waiver: None</p>
Moab Canyon Utility Corridor	Highway 191 Utility Corridor within Moab Canyon (3,119 acres)	NSO		X	X	X	<p>No mineral activities would be allowed within the utility corridor other than those associated with utilities.</p> <p>Purpose: To prevent future surface use conflicts along Highway 191 and within the utility corridor.</p> <p>Exception: General exception applies.</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Colorado and Green River Corridors	Three Rivers Mineral Withdrawal (23,441 acres)	NSO	X	X		X	<p>No surface-disturbing activities within the area of the Three Rivers locatable mineral withdrawal, which includes suitable Wild and Scenic River (WSR) segments.</p> <p>Purpose: To protect riparian, wildlife, scenic, and recreational values along the major river corridors.</p> <p>Exception: None</p> <p>Modification: None</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							Waiver: None
Colorado and Green River Corridors	Colorado and Green River Corridors (23,441 acres)	Closed			X		The area of the Three Rivers locatable mineral withdrawal, which includes suitable WSR segments, would be closed to mineral leasing.
Improved Access Roads for Recreational Use in the Canyon Rims Special Recreation Management Area (SRMA)	Needles and Anticline Overlook Roads	CSU		X		X	<p>The use of heavy trucks (over 20 tons) is precluded on the paved Needles Overlook Road and the Anticline Overlook Road once it is paved.</p> <p>Purpose: To protect the integrity and public enjoyment of the Needles and Anticline Overlook Roads.</p> <p>Exception: If there is no alternative to the use of these roads, the Authorized Officer may grant an exception if a bond is provided in sufficient amount to repair any potential damage to the roads resulting from the use of heavy trucks for mineral operations.</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Improved Access Roads for Recreational Use in the Canyon Rims SRMA	Needles and Anticline Overlook Roads	CSU			X		<p>The use of heavy trucks (over 20 tons) is precluded on the paved Needles Overlook Road and the Anticline Overlook Road once it is paved.</p> <p>Purpose: To protect the integrity and public enjoyment of the Needles and Anticline Overlook Roads.</p> <p>Exception: None</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Filming Locations	High Use Filming Locations (177,594 acres)	CSU		X		X	<p>A visual assessment would be required within 1 mile of the high use filming locations listed below. This assessment must demonstrate that the proposed mineral operations within this area would not result in long-term impairment to the scenic quality from the filming locations. These filming locations include:</p> <ul style="list-style-type: none"> • Needles Overlook • Colorado River Corridor and Corona Arch • Green River Canyon • Kane Creek Corridor • Looking Glass Rock • View from Dead Horse Point • Potash Road/Shافر Basin (including Fossil Point) • Long Canyon • Highway 211 (including Newspaper Rock) • Highway 313

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							<ul style="list-style-type: none"> Mineral Bottom Road Behind the Rocks Jeep Route Monitor and Merrimac/Determination Towers/Mill Canyon/Bartlett Wash Gemini Bridges/Bull Canyon Jewell Tibbetts Arch White Wash. <p>Purpose: To protect the immediate foreground of high use filming locations.</p> <p>Exception: The Authorized Officer may grant an exception if a visual assessment demonstrates that the proposed mineral operations would not result in long-term impairment to the scenic quality from the filming location.</p> <p>Modification: The Authorized Officer may modify the stipulation if a filming location ceases to be utilized or if a new location becomes heavily used.</p> <p>Waiver: The Authorized Officer may waive the stipulation if the film industry ceases to utilize the area for filming.</p>
Filming locations	High Use Filming Locations (177,594 acres)	NSO			X		<p>No surface occupancy would be allowed within 1 mile of the high use filming locations listed below:</p> <ul style="list-style-type: none"> Needles Overlook Colorado River corridor and Corona Arch Green River Canyon Kane Creek Corridor Looking Glass Rock View from Dead Horse Point Potash Road/Shافر Basin (including Fossil Point) Long Canyon Highway 211 (including Newspaper Rock) Highway 313 Mineral Bottom Road Behind the Rocks Jeep Safari Route Monitor and Merrimac/Determination Towers/Mill Canyon/Bartlett Wash Gemini Bridges/Bull Canyon Jewell Tibbetts Arch White Wash. <p>Purpose: To protect the immediate foreground of high use filming locations.</p> <p>Exception: None</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
Lands with Wilderness Characteristics	Lands Identified by the BLM as having Wilderness Characteristics and Analyzed in the 2008 RMPs (192,220 acres)	CSU		X		X	<p>Apply the Baseline CSU stipulation (see Minerals section of this Appendix for Alternatives B and D) to the following lands identified by the BLM in the 2008 Resource Management Plan (RMP) as having wilderness characteristics:</p> <ul style="list-style-type: none"> • Arches Adjacent • Behind the Rocks • Bridger Jack Mesa • Dead Horse Cliffs • Dome Plateau (partial) • Fisher Towers • Goldbar • Gooseneck • Hatch/Lockhart/Hart • Hatch Wash • Horsethief Point • Hunter Canyon • Indian Creek • Labyrinth Canyon • Lost Spring Canyon • Negro Bill Canyon • Shafer Canyon • Shay Mountain • Yellowbird.
Lands with Wilderness Characteristics	Lands Identified by the BLM as having Wilderness Characteristics (265,246 acres)	CSU			X		<p>Apply the Baseline CSU stipulation (see Minerals section of this Appendix for Alternative C) to the following lands identified by the BLM in the 2008 RMP as having wilderness characteristics:</p> <ul style="list-style-type: none"> • Arches Adjacent • Behind the Rocks • Bridger Jack Mesa • Dead Horse Cliffs • Dome Plateau (partial) • Fisher Towers • Goldbar • Gooseneck • Harts Point • Hatch/Lockhart/Hart • Hatch Wash • Horsethief Point • Hunter Canyon • Indian Creek • Labyrinth Additions

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							<ul style="list-style-type: none"> • Labyrinth Canyon • Lockhart Basin/Harts Draw Additions • Lost Spring Canyon • Mat Martin Point • Negro Bill Canyon • Shafer Canyon • Shay Mountain • Yellowbird. <p>Apply the Baseline CSU stipulation to the following lands identified by the BLM as having wilderness characteristics subsequent to the 2008 RMP:</p> <ul style="list-style-type: none"> • Dead Horse Cliffs additions • Dripping Spring • Lockhart additions • Trough Springs • Upper Indian Creek.
Moab Airport	Moab Airport (296 acres)	NSO	X	X	X	X	<p>No surface-disturbing activities would be allowed within the Moab Airport area.</p> <p>Purpose: To eliminate potential safety issues and surface use conflicts.</p> <p>Exception: An exception could be granted if it can be demonstrated that the action would not result in any surface use conflicts.</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Moab Landfill	Moab Landfill (82 acres)	NSO	X	X	X	X	<p>No surface-disturbing activities would be allowed within the Moab landfill area.</p> <p>Purpose: To eliminate potential safety issues and surface use conflicts.</p> <p>Exception: An exception could be granted if it can be demonstrated that the action would not result in any surface use conflicts.</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Dead Horse Point State Park	Dead Horse Point State Park (split estate with Federal minerals) (3,932 acres)	NSO	X	X	X	X	<p>No surface-disturbing activities would be allowed within Dead Horse Point State Park.</p> <p>Purpose: To protect visual resources and to facilitate management of the State Park.</p> <p>Exception: None</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Minerals/	Planning Area	CSU		X		X	<p>All new potash leases, as well as all potash leases subject to readjustment, would be subject to the following diligent development requirements:</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
Potash	Alternatives B1 and D only						<p>The Authorized Officer would pursue lease cancellation if after ten years from the date of lease issuance, potassium or related products are not being produced in paying quantities from:</p> <ol style="list-style-type: none"> 1. The lease; or 2. The contiguous mining block; or 3. When the gross value of the potassium compounds and other related products produced from the lease or the contiguous mining block at the point of shipment to market does not yield a return in excess of all direct and indirect operating costs allocable to their production. <p>The Authorized Officer may grant a lease suspension in the event of delays in the permitting process that were unforeseen, that were in no way attributable to the lessee or operator, and that could not be readily accommodated in the normal course of business by a prudent lessee or operator.</p> <p>In addition, all potash prospecting permits would include a stipulation that if a preference right lease is ultimately issued, it would include the diligent development stipulation above.</p> <p>Purpose: To ensure that production of potash is achieved within a reasonable amount of time.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>
Minerals Recreation Watershed Wilderness Characteristics Visual Resources Wildlife Habitat	SRMAs, Courthouse Wash Watershed, Salt Wash Watershed, Lands with Wilderness Characteristics, Areas with High Visual Quality, Sagebrush/Step pe Habitat and Wildlife Habitats	CSU (Referred to as Baseline CSU)		X			<p>Mineral operations would be subject to the following requirements:</p> <ol style="list-style-type: none"> 1. Multiple wells per pad, as appropriate. 2. Well pads would be placed no closer than 2 miles apart. 3. Oil and Gas: Production facilities would be co-located and designed to minimize surface impacts. Pipelines and utilities would be placed within or immediately adjacent to existing roads. Potash: Facilities associated with potash production wells would be designed to minimize surface impacts. Pipelines and utilities would be placed along existing roads, including new roads constructed in association with the project. 4. Limit unreclaimed surface disturbance to no more than 15 acres per well pad (including associated facilities, roads, pipelines, and utilities) following interim reclamation. 5. Extensive interim reclamation of roadway disturbance and reclamation of well pads to minimize long-term surface disturbance.

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
	Alternative B1 only (208,185 acres)						<p>6. Final reclamation fully restoring the original landform. Travel routes would be restored to their original character.</p> <p>7. This stipulation would allow for geophysical operations.</p> <p>8. Compensatory mitigation outside the area of impact could be required to minimize impacts to resources.</p> <p>Purpose: To minimize the amount of surface disturbance and related impacts resulting from mineral development in areas with sensitive resources. These resources include the Courthouse Wash Watershed, the Salt Wash Watershed, SRMAs (where specified), lands identified by the BLM as having wilderness characteristics, areas inventoried as having high visual qualities (Visual Resource Inventory [VRI] Class II), sagebrush/steppe habitat, bighorn sheep habitat (except a small portion located within the Potash Processing Facility Areas [PPFAs]), and crucial deer and elk habitat.</p> <p>Exception: None</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Minerals: Oil and Gas Recreation Watershed Wilderness Characteristics Visual Resources Wildlife Habitat	SRMAs, Courthouse Wash Watershed, Salt Wash Watershed, Lands with Wilderness Characteristics, Areas with High Visual Quality, Sagebrush/Steppe Habitat and Wildlife Habitat Alternative B2 only (222,289 acres)	CSU (Referred to as Baseline CSU)		X			<p>Oil and gas operations would be subject to the following requirements:</p> <ol style="list-style-type: none"> Multiple wells per pad, as appropriate. Well pads would be placed no closer than 2 miles apart. Production facilities would be co-located and designed to minimize surface impacts. Pipelines and utilities would be placed within or immediately adjacent to existing roads. Limit unreclaimed surface disturbance to no more than 15 acres per well pad (including associated facilities, roads, pipelines, and utilities) following interim reclamation. Extensive interim reclamation of roadway disturbance and reclamation of well pads to minimize long-term surface disturbance. Final reclamation fully restoring the original landform. Travel routes would be restored to their original character. This stipulation would allow for geophysical operations. Compensatory mitigation outside the area of impact could be required to minimize impacts to resources. <p>Purpose: To minimize the amount of surface disturbance and related impacts resulting from mineral development in areas with sensitive resources. These resources include the Courthouse Wash Watershed, the Salt Wash Watershed, SRMAs (where specified), lands identified by the BLM as having wilderness characteristics, areas inventoried as having high visual qualities (Visual Resource</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							Inventory [VRI] Class II), sagebrush/steppe habitat, bighorn sheep habitat (except a small portion located within the PPFAs), and crucial deer and elk habitat. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Minerals; Oil and Gas Wilderness Characteristics Visual Resources Wildlife Habitat	Lands with Wilderness Characteristics, Areas with High Visual Quality, Sagebrush/Steppe Habitat and Wildlife Habitat (25,942 acres)	CSU (Referred to as Baseline CSU)			X		Oil and gas operations would be subject to the following requirements: <ol style="list-style-type: none"> 1. Multiple wells per pad, as appropriate. 2. Well pads would be placed no closer than 2 miles apart. 3. Production facilities would be co-located and designed to minimize surface impacts. Pipelines and utilities would be placed along existing roads. 4. Limit unreclaimed surface disturbance to no more 15 acres per well pad (including associated facilities, roads, pipelines, and utilities) following interim reclamation. 5. Extensive interim reclamation of roadway disturbance and reclamation of well pads to minimize long-term surface disturbance. 6. Final reclamation fully restoring the original landform. Travel routes would be restored to their original character. 7. This stipulation would allow for geophysical operations. 8. Compensatory mitigation outside the area of impact could be required to minimize impacts to resources. Purpose: To minimize the amount of surface disturbance and associated impacts in areas with sensitive resources. These resources include lands with wilderness characteristics, VRI II areas, sagebrush/steppe habitat, and substantial and crucial deer and elk habitat. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Minerals Recreation Watershed Wilderness Characteristics Visual Resources	SRMAs, Courthouse Wash Watershed, Salt Wash Watershed, Lands with Wilderness Characteristics,	CSU (Referred to as Baseline CSU)				X	Mineral operations would be subject to the following requirements: <ol style="list-style-type: none"> 1. Multiple wells per pad as appropriate. 2. Well pads would be placed no closer than 2 miles apart. 3. Oil and Gas: Production facilities would be co-located and designed to minimize surface impacts. Pipelines and utilities would be placed within or immediately adjacent to existing roads. Potash: Facilities associated with potash production wells would be designed to minimize surface impacts. Pipelines and utilities would be

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
Wildlife Habitat	Areas with High Visual Quality, Sagebrush Steppe Habitat and Wildlife Habitats (213,218 acres)						<p>placed along existing roads, including new roads constructed in association with the project.</p> <ol style="list-style-type: none"> 4. Limit unreclaimed surface disturbance to no more than 15 acres per well pad (including associated facilities, roads, pipelines, and utilities) following interim reclamation. 5. Extensive interim reclamation of roadway disturbance and reclamation of well pads to minimize long-term surface disturbance. 6. Final reclamation fully restoring the original landform. Travel routes would be restored to their original character. 7. This stipulation would allow for geophysical operations. 8. Compensatory mitigation outside the area of impact could be required to minimize impacts to resources. <p>Purpose: To minimize the amount of surface disturbance and related impacts resulting from mineral development in areas with sensitive resources. These resources include the Courthouse Wash Watershed, the Salt Wash Watershed, SRMAs (where specified), lands identified by the BLM as having wilderness characteristics, areas inventoried as having high visual qualities (VRI Class II), sagebrush/steppe habitat, bighorn sheep habitat (except a small portion located within the PPFAs), and crucial deer and elk habitat.</p> <p>Exception: Where it can be shown that the proposed operation would not cause unacceptable impacts, the Authorized Officer may grant an exception based on any of the factors listed below:</p> <ol style="list-style-type: none"> a. If alternative placement of well pads would enable the operator to use areas that have been previously disturbed. b. If alternative placement of well pads would minimize the need for new road construction. c. If there is a demonstrated reduction in the impacts to resources. d. If there is a valid safety concern. e. If the requirement of 2 mile spacing would preclude a lessee/operator from exercising their lease rights where the spacing would locate a well pad outside of the lease. f. Within Potash Leasing Areas (PLA), an exception to the 2 mile placement could be granted if the proponent successfully demonstrates that a 2 mile placement is not technologically feasible for potash recovery. An exception to the 2 mile placement would still require the maximum technologically feasible placement of potash wells. g. An exception to the 2 mile placement could be granted if the proponent successfully demonstrates that geologic factors preclude access to a

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							substantial portion of the oil and gas reservoir. An exception to the 2 mile placement would still require the maximum technologically feasible placement of oil and gas wells. Modification: General modification applies. Waiver: General waiver applies.
Minerals/Potash	Potash Processing Facility Areas Alternative B1 only (42,492 acres)	CSU		X			Potash processing facilities would be located only within PPFAs. As part of this stipulation, compensatory mitigation outside the area of impact would be required to offset the impacts of potash processing facility construction. Compensatory mitigation outside the area of impact includes, but is not limited to, water developments, habitat improvements, vegetation improvements, and other applicable measures within pronghorn habitat, bighorn sheep habitat, and sagebrush steppe habitat. Purpose: To locate potash processing facilities in areas with fewer sensitive resources because potash processing facilities require a substantial commitment of public lands. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Minerals/Potash	Potash Processing Facility Areas (42,492 acres)	CSU				X	Potash processing facilities would be located only within PPFAs As part of this stipulation, compensatory mitigation outside the area of impact would be required to offset the impacts of potash processing facilities construction. Compensatory mitigation outside the area of impact includes, but is not limited to, water developments, habitat improvements, vegetation improvements, and other applicable measures within pronghorn habitat, bighorn sheep habitat, and sagebrush steppe habitat. Purpose: To locate potash processing facilities in areas with fewer sensitive resources because potash processing facilities require a substantial commitment of public lands. Exception: The Authorized Officer could grant an exception to the stipulation for small-scale potash processing facilities located within the PLA where it can be shown that the proposed operation would not cause unacceptable impacts. These facilities would produce no more than 10,000 tons of potash per year and would disturb no more than 100 unreclaimed acres within a PLA. Modification: General modification applies. Waiver: General waiver applies.

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
Minerals	Porcupine Rim, Mat Martin Point, and Gold Bar Rim (6,751 acres)	NSO		X		X	No surface occupancy would be allowed within 0.5 miles of the rims of Porcupine Rim, Mat Martin Point and Gold Bar Rim. Purpose: To eliminate potential rockfalls resulting from mineral activity and to protect areas below steep rims. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Minerals	Porcupine Rim, Mat Martin Point, and Gold Bar Rim (9,642 acres)	NSO			X		No surface occupancy would be allowed within 1 mile of the rims of Porcupine Rim, Mat Martin Point and Gold Bar Rim. Purpose: To eliminate potential rockfalls resulting from mineral activity and to protect areas below steep rims. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Minerals	Split Estate Lands (9,599 acres in Moab Field Office)	Varies	X				On split-estate lands within the Planning Area, the operator would comply with the lease stipulations applied to surrounding lands with Federal surface. Purpose: To reduce potential surface use conflicts with homes and viewsheds. Exception: The Authorized Officer would apply the same lease exceptions as those applied to surrounding lands with Federal surface. Modification: None Waiver: None
Minerals	Split Estate Lands (5,281 acres in Monticello Field Office)	Varies	X				On split-estate lands within the Monticello Field Office, lease stipulations would consist of those necessary to comply with non-discretionary Federal laws, such as the Endangered Species Act (ESA). Purpose: To reduce potential surface use conflicts. Exception: None Modification: None Waiver: None
Minerals	Split Estate Lands (14,880 acres)	Varies		X	X	X	On split-estate lands within the Planning Area, the operator would comply with the lease stipulations applied to surrounding lands with Federal surface. Purpose: To reduce potential surface use conflicts. Exception: The Authorized Officer would apply the same lease exceptions as those applied to surrounding lands with Federal surface.

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							Modification: The Authorized Officer would apply the same modifications as those applied to surrounding lands with Federal surface. Waiver: The Authorized Officer would apply the same waivers as those applied to surrounding lands with Federal surface.
Natural Areas	Natural Areas (429 acres)	NSO	X	X	X	X	No surface occupancy would be allowed in lands managed as Natural Areas. Purpose: To protect, preserve, and maintain areas managed for their wilderness characteristics. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Paleontology	Within potential fossil yield classification Class 4 and 5 Areas (118,952 acres)	CSU		X		X	Surveys and monitoring (where appropriate) are required for all surface-disturbing mineral activities in potential fossil yield classification (PFYC) Class 4 and 5 areas. Where monitoring encounters vertebrate and vertebrate trace fossils during mineral operations, all operations must cease until the BLM determines whether the site can be avoided, protected, or fully excavated. Purpose: To protect paleontological resources. Exception: None Modification: The Authorized Officer could modify the stipulation if it is determined that the project area is not located within a PFYC Class 4 or 5 area. Waiver: The Authorized Officer could waive the stipulation if it is determined that the entire lease area is not located within a PFYC Class 4 or 5 area.
Paleontology	Within PFYC Class 3, 4 and 5 Areas (265,689 acres)	CSU			X		Surveys and monitoring (where appropriate) are required for all surface-disturbing mineral activities in PFYC Class 3, 4, and 5 areas. Where monitoring encounters vertebrate and vertebrate trace fossils during mineral operations, all operations must cease until the BLM determines whether the site can be avoided, protected, or fully excavated. Purpose: To protect paleontological resources. Exception: None Modification: The Authorized Officer could modify the stipulation if it is determined that the project area is not located within a PFYC Class 3, 4, or 5 area. Waiver: The Authorized Officer could waive the stipulation if it is determined that the entire lease area is not located within a PFYC Class 3, 4, or 5 area.
Recreation	Developed Recreation Sites	NSO	X				No surface-disturbing activities are allowed within 0.5 miles of developed recreation sites (current and planned, See Appendix D).

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
	(24,311 acres)						Purpose: To protect Federal investment in facilities, to provide for recreational use, and to protect the viewshed and soundscape from the facility. Exception: None Modification: None Waiver: None
Recreation	Developed Recreation Sites (71,108 acres)	NSO		X			No surface-disturbing activities are allowed within 1 mile of developed recreation site boundaries (current and planned, See Appendix D). Purpose: To protect Federal investment in facilities, to provide for recreational use, and to protect the viewshed and soundscape from development. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Recreation	Developed Recreation Sites (191,584 acres)	NSO			X		No surface-disturbing activities are allowed within 2 miles of developed recreation site boundaries (current and planned, See Appendix D). Purpose: To protect Federal investment in facilities, to provide for recreational use, and to protect the viewshed and soundscape from development. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Recreation	Developed Recreation Sites (24,311 acres)	NSO				X	No surface-disturbing activities are allowed within 0.5 miles of developed recreation site boundaries (current and planned, See Appendix D). Purpose: To protect Federal investment in facilities, to provide for recreational use, and to protect the viewshed and soundscape from the facility. Exception: The Authorized Officer may grant an exception if a viewshed analysis indicates no long-term impairment of the visual resources from the recreation site and if it can be demonstrated there would be no auditory impacts to the recreation facility. Modification: The Authorized Officer may modify the stipulation to the boundary of the developed recreation site if the site is expanded. Waiver: The Authorized Officer may waive the stipulation if the developed recreation site has been decommissioned.
Recreation	High Use Recreation	NSO		X			No surface occupancy would be allowed within 0.5 miles of the centerline of the following high use motorized routes (jeep) and non-motorized trails (hiking and bicycle):

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
	Routes and Trails (95,143 acres)						<p><u>Motorized routes</u></p> <ul style="list-style-type: none"> • Metal Masher (Arth's Rim) Jeep route • Gold Bar Rim jeep route • Golden Spike jeep route • Poison Spider jeep route • Cliffhanger jeep route • Chicken Corners jeep route • Moab Rim jeep route • Kane Creek jeep route • Lockhart jeep route • Seven Mile Rim jeep route. <p><u>Non-motorized trails</u></p> <ul style="list-style-type: none"> • Klondike Bluffs bicycle trails • Bar M bicycle trails • Porcupine Rim trail • Magnificent Seven/7 Up bicycle trail systems • Ahab bicycle trails • Lower Monitor and Merrimac bicycle trail • Hunter Canyon hiking trail. <p>Purpose: To protect the recreation experience and to provide visual and auditory protection to the immediate foreground.</p> <p>Exception: None</p> <p>Modification: The Authorized Officer may modify the stipulation if it is determined that a trail, route, or a portion thereof is no longer being utilized for recreation within the project area.</p> <p>Waiver: The Authorized Officer may waive the stipulation if it is determined that trails and routes are no longer utilized within the entire lease area.</p>
Recreation	High and Moderate Use Recreation Routes and Trails (211,057 acres)	NSO			X		<p>No surface occupancy would be allowed within 1 mile of the centerline of the following high use and moderate use motorized routes (jeep) and non-motorized trails (hiking and bicycle):</p> <p><u>Non-motorized routes</u></p> <ul style="list-style-type: none"> • Bar M bicycle trails • Klondike Bluffs bicycle trails • Porcupine Rim trail • Magnificent Seven/7 Up bicycle trail systems • Ahab bicycle trails • Lower Monitor and Merrimac bicycle trail • Hunter Canyon hiking trail • Jug Rock Equestrian Trail System

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							<ul style="list-style-type: none"> Jewel Tibbets hiking trail Trough Springs hiking trail. <p><u>Motorized routes</u></p> <ul style="list-style-type: none"> Metal Masher (Arth's Rim) jeep route Gold Bar Rim jeep route Golden Spike jeep route Poison Spider jeep route Cliffhanger jeep route Chicken Corners jeep route Moab Rim jeep route Behind the Rocks jeep route Kane Creek jeep route Lockhart jeep route Seven Mile Rim jeep route Secret Spire jeep route. <p>Purpose: To protect the recreation experience and to provide visual and auditory protection to the immediate foreground.</p> <p>Exception: None</p> <p>Modification: The Authorized Officer may modify the stipulation if it is determined that a trail, route, or a portion thereof, is no longer being utilized for recreation within the project area.</p> <p>Waiver: The Authorized Officer may waive the stipulation if it is determined that trails and routes are no longer utilized within the entire lease area.</p>
Recreation	High Use Recreation Routes and Trails (95,143 acres)	NSO				X	<p>No surface occupancy would be allowed within 0.5 miles of the centerline of the following high use <u>motorized</u> routes (<u>jeep</u>) and non-motorized trails (<u>hiking and bicycle</u>):</p> <p><u>Motorized routes</u></p> <ul style="list-style-type: none"> Metal Masher (Arth's Rim) jeep route Gold Bar Rim jeep route Golden Spike jeep route Poison Spider jeep route Cliffhanger jeep route Chicken Corners jeep route Moab Rim jeep route Kane Creek jeep route Lockhart jeep route Seven Mile Rim jeep route. <p><u>Non-motorized trails</u></p> <ul style="list-style-type: none"> Klondike Bluffs bicycle trails

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							<ul style="list-style-type: none"> • Bar M bicycle trails • Porcupine Rim trail • Magnificent Seven/7 Up bicycle trail systems • Ahab bicycle trails • Lower Monitor and Merrimac bicycle trail • Hunter Canyon hiking trail. <p>Purpose: To protect the recreation experience and to provide visual and auditory protection to the immediate foreground. Non-motorized trail users travel at slower speeds than motorized users; therefore, the buffers provided to protect the recreation experience vary by mode of travel.</p> <p>Exception: The Authorized Officer could grant an exception if a viewshed analysis indicates no long-term impairment to the immediate foreground view (0.5 miles) and it can be demonstrated that there would be no long-term auditory impairment to the trail or for access roads and pipelines if there are no practical alternatives.</p> <p>Modification: The Authorized Officer may modify the stipulation if it is determined that a trail, route, or a portion thereof, is no longer being utilized for recreation within the project area.</p> <p>Waiver: The Authorized Officer may waive the stipulation if it is determined that trails and routes are no longer utilized within the entire lease area.</p>
Recreation	High Use Climbing/ Canyoneering Areas (22,575 acres)	NSO		X			<p>No surface occupancy would be allowed within a 0.5 mile radius around high use climbing/canyoneering areas:</p> <ul style="list-style-type: none"> • Indian Creek • Wall Street • Ice Cream Parlor • The Tombstones of Kane Creek • Cameltoe Canyon • Granary Canyon • Rock of Ages • Repeat Junior • Winter Camp Slot. <p>Purpose: To protect the recreation experience and provide visual and auditory protection to the immediate foreground.</p> <p>Exception: None</p> <p>Modification: The Authorized Officer may modify the stipulation if it is determined that a climbing area, is no longer being utilized for recreation within the project area. The Authorized Officer may also modify the stipulation if it is determined that new routes or trails are being heavily utilized for recreation within the project area.</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							Waiver: The Authorized Officer may waive the stipulation if it is determined that no climbing area is being utilized within the entire lease area.
Recreation	High Use Climbing/ Canyoneering Areas (64,506 acres)	NSO			X		<p>No surface occupancy would be allowed within a 1.0 mile radius around high and moderate use climbing/canyoneering areas:</p> <ul style="list-style-type: none"> • Indian Creek • Wall Street • Ice Cream Parlor • The Tombstones of Kane Creek • Long Canyon/Day Canyon/Culvert Canyon • Cameltoe Canyon • Granary Canyon • Rock of Ages • Repeat Junior • Winter Camp Slot. <p>Purpose: To protect the recreation experience and to provide visual and auditory protection to the immediate foreground.</p> <p>Exception: None</p> <p>Modification: The Authorized Officer may modify the stipulation if it is determined that a climbing area is no longer being utilized for recreation within the project area. The Authorized Officer may also modify the stipulation if it is determined that new routes or trails are being heavily utilized for recreation within the project area.</p> <p>Waiver: The Authorized Officer may waive the stipulation if it is determined that no climbing area is being utilized within the entire lease area.</p>
Recreation	High Use Climbing/ Canyoneering Areas (22,575 acres)	NSO				X	<p>No surface occupancy would be allowed within a 0.5 mile radius around high use climbing/canyoneering areas:</p> <ul style="list-style-type: none"> • Indian Creek • Wall Street • Ice Cream Parlor • The Tombstones of Kane Creek • Cameltoe Canyon • Granary Canyon • Rock of Ages • Repeat Junior • Winter Camp Slot. <p>Purpose: To protect the recreation experience and to provide visual and auditory protection to the immediate foreground.</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							<p>Exception: The Authorized Officer could grant an exception if a viewshed analysis indicates no long term impairment to the immediate foreground view (0.5 miles) and it can be demonstrated that would be no auditory impairment to the climbing area.</p> <p>Modification: The Authorized Officer may modify the stipulation if it is determined that a climbing area, is no longer being utilized for recreation within the project area. A modification could also be granted if it is determined that new routes or trails are being heavily utilized for recreation within the project area.</p> <p>Waiver: The Authorized Officer may waive the stipulation if it is determined that no climbing area is being utilized within the entire lease area.</p>
Recreation	Western Portion of the Canyon Rims SRMA (42,670 acres)	NSO		X			<p>No surface occupancy would be allowed within VRM Class II areas in the Canyon Rims SRMA, as well as to all lands on the west side of the Anticline Road. This includes the VRM Class II corridor along the Needles and Anticline Overlook roads.</p> <p>Purpose: To protect recreational uses and experiences.</p> <p>Exception: None</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Recreation	Western Portion of the Canyon Rims SRMA (42,670 acres)	NSO				X	<p>No surface occupancy would be allowed within VRM Class II areas in the Canyon Rims SRMA, as well as to all lands on the west side of the Anticline Road. This includes the VRM Class II corridor along the Needles and Anticline Overlook roads.</p> <p>Purpose: To protect recreational uses and experiences.</p> <p>Exception: The Authorized Officer may grant an exception if it could be demonstrated using visual analysis that the proposed operation would not result in long-term visible impairment from Key Observation Points as defined by the BLM VRM Manual.</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Recreation	Canyon Rims SRMA Hatch Wash Focus Area (3,614 acres)	NSO		X		X	<p>No surface occupancy would be allowed within the Hatch Wash Hiking and Backpacking Focus Area.</p> <p>Purpose: To protect recreational uses and experiences.</p> <p>Exception: General exception applies.</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Recreation	Canyon Rims SRMA	Baseline CSU		X		X	<p>Apply the Baseline CSU stipulation (see Minerals section of this Appendix for Alternatives B and D) throughout that portion of the SRMA that is not managed as NSO.</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
	(55,230 acres)						
Recreation	Canyon Rims SRMA (101,520 acres)	NSO			X		No surface occupancy would be allowed within the entire Canyon Rims SRMA. Purpose: To protect recreational uses and experiences. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Recreation	Colorado Riverway SRMA (31,702 acres)	NSO		X	X	X	No surface occupancy would be allowed within the portion of the Colorado Riverway SRMA within the Planning Area. Purpose: To protect recreational uses and experiences. Exception: General exception applies. Modification: General modification applies. Waiver: General waiver applies.
Recreation	Dolores River Canyons SRMA (2,872 acres)	NSO		X	X	X	No surface occupancy would be allowed within the portion of the Dolores River Canyons SRMA within the Planning Area. Purpose: To protect recreational uses and experiences. Exception: General exception applies. Modification: General modification applies. Waiver: General waiver applies.
Recreation	Indian Creek SRMA (76,427 acres)	NSO		X	X	X	No surface occupancy would be allowed within the Indian Creek SRMA. Purpose: To protect recreational uses and experiences. Exception: General exception applies. Modification: General modification applies. Waiver: General waiver applies.
Recreation	Goldbar/Corona Arch Focus Area (4,773 acres)	NSO	X				No surface-disturbing activities would be allowed in the Goldbar/Corona Arch Focus Area. Purpose: To protect primitive hiking opportunities and scenic values. Exception: None Modification: None Waiver: None
Recreation	Focus Areas within the Labyrinth	NSO		X		X	No surface occupancy would be allowed within the following Focus Areas: <ul style="list-style-type: none"> • Bar M Mountain Biking Focus Area (2,906 acres) • Bartlett Slickrock Freeride Mountain Bike Focus Area (166 acres)

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
	Rims/Gemini Bridges SRMA (54,255 acres)						<ul style="list-style-type: none"> Gemini Bridges/Poison Spider Mesa Focus Area (16,589 acres) Goldbar/Corona Arch Hiking Focus Areas (4,773 acres) Klondike Bluffs Mountain Biking Focus Area (14,597 acres) Labyrinth Canyon Canoe Focus Area (6,812 acres) Mill Canyon/Upper Courthouse Mountain Biking Focus Area (5,741 acres) Mineral Canyon/Horsethief Point Competitive BASE Jumping Focus Area (762 acres) Seven Mile Canyons Equestrian Focus Area (1,028 acres) Spring Canyon Hiking Focus Area (455 acres) Tusher Slickrock Mountain Biking Focus Area (428 acres). <p>Purpose: To protect recreational uses and experiences. Exception: General exception applies. Modification: General modification applies. Waiver: General waiver applies.</p>
Recreation	Labyrinth Rims/Gemini Bridges SRMA	CSU		X		X	Apply the Baseline CSU stipulation (see Minerals section of this Appendix for Alternatives B and D) throughout that portion of the SRMA that is not managed as NSO.
Recreation	Labyrinth Rims/Gemini Bridges SRMA (275,788 acres)	NSO			X		<p>No surface occupancy would be allowed within the entire Labyrinth Rims/Gemini Bridges SRMA (within the Planning Area).</p> <p>Purpose: To protect recreational uses and experiences. Exception: None Modification: General modification applies. Waiver: General waiver applies.</p>
Recreation	Focus Areas within South Moab SRMA (6,990 acres)	NSO		X		X	<p>No surface occupancy would be allowed within the 24 Hours of Moab and Behind the Rocks Hiking Focus Areas.</p> <p>Purpose: To protect recreational uses and experiences. Exception: General exception applies. Modification: General modification applies. Waiver: General waiver applies.</p>
Recreation	South Moab SRMA	CSU		X		X	Apply the Baseline CSU stipulation (see Minerals section of this Appendix for Alternatives B and D) throughout that portion of the SRMA that is not managed as NSO.
Recreation	South Moab SRMA	NSO			X		No surface occupancy would be allowed within the entire South Moab SRMA within the Planning Area.

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
	(23,143 acres)						Purpose: To protect recreational uses and experiences. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Soil	Saline Soils in the Mancos Shale Alternative B2 only (68,275 acres)	TL	X	X			No surface-disturbing activities would be allowed during the period from December 1 to May 31. This restriction includes heavy equipment traffic on existing roads associated with drilling operations. Purpose: To minimize watershed damage including compaction, rutting, and topsoil loss on saline soils derived primarily from the Mancos Shale. Exception: The Authorized Officer may grant an exception if the operator can provide a plan of development demonstrating that the proposed action would be properly designed and constructed to support the anticipated types and levels of use. Roads must be designed to meet BLM road standards for drainage control and surfaced to support heavy equipment and tractor trailers. Adjustments to the timing restriction could be considered by the Authorized Officer on a case-by-case basis, depending on current soil and weather conditions. Modification: General modification applies. Waiver: General waiver applies.
Soil	Saline Soils in the Mancos Shale Alternative B1 only (49,915 acres)	TL		X		X	No surface-disturbing activities would be allowed during the period from December 1 to May 31. This restriction includes heavy equipment traffic on existing roads associated with drilling operations. This restriction does not apply to PPFAs. Purpose: To minimize watershed damage including compaction, rutting, and topsoil loss on saline soils derived primarily from the Mancos Shale. Exception: The Authorized Officer may grant an exception if the operator can provide a plan of development demonstrating that the proposed action would be properly designed and constructed to support the anticipated types and levels of use. Roads must be designed to meet BLM road standards for drainage control and surfaced to support heavy equipment and tractor trailers. Adjustments to the timing restriction could be considered by the Authorized Officer on a case-by-case basis, depending on current soil and weather conditions. Modification: The Authorized Officer may modify the stipulation if it is determined that the project area is not located within saline soils. Waiver: The Authorized Officer may waive the stipulation if areas mapped as saline soils are verified as not present on the entire leasehold.

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
Soil	Saline Soil in the Mancos Shale (68,275 acres)	TL			X		<p>No surface-disturbing activities would be allowed during the period from December 1 to May 31. This restriction includes heavy equipment traffic on existing roads associated with drilling operations.</p> <p>Purpose: To minimize watershed damage including compaction, rutting, and topsoil loss on saline soils derived primarily from the Mancos Shale.</p> <p>Exception: None</p> <p>Modification: The Authorized Officer may modify the stipulation if it is determined that the project area is not located within saline soils.</p> <p>Waiver: The Authorized Officer may waive the stipulation if areas mapped as saline soils are verified as not present on the entire leasehold.</p>
Soil	Saline Soils within the PPFAs Alternative B1 only (18,360 acres)	CSU		X		X	<p>Compensatory mitigation outside the area of impact would be required within PPFAs for any surface disturbance on saline soils. No more than 1 acre of mitigation would be required for each acre of disturbance. Compensatory mitigation outside the area of impact could include: 1) reclamation of non-designated roads, and 2) planting and seeding in appropriate areas to improve soil condition.</p> <p>Purpose: To consider mitigation for saline soils outside the PPFA because it may not be feasible or practical to mitigate impacts to an acceptable level in the same area as the use authorization.</p> <p>Exception: General exception applies.</p> <p>Modification: The Authorized Officer may modify the stipulation if it is determined that the project area is not located within saline soils.</p> <p>Waiver: The Authorized Officer may waive the stipulation if areas mapped as saline soils are verified as not present on the entire PPFA.</p>
Soil	Saline Soils (68,275 acres)	CSU		X	X	X	<p>Compensatory mitigation outside the area of impact for any surface disturbance on saline soils would be required. No more than one acre of mitigation would be required for each acre of disturbance. Compensatory mitigation outside the area of impact could include: 1) reclamation of non-designated roads, and 2) planting and seeding in appropriate areas to improve soil condition.</p> <p>Purpose: To consider mitigation for saline soils outside the area of impact because it may not be feasible or practical to mitigate impacts to an acceptable level in the same area as the use authorization.</p> <p>Exception: The Authorized Officer may grant an exception if it can be demonstrated that it would be feasible to fully mitigate the impacts to saline soils onsite.</p> <p>Modification: The Authorized Officer may modify the stipulation if it is determined that the project area is not located within saline soils.</p> <p>Waiver: The Authorized Officer may waive the stipulation if areas mapped as saline soils are verified as not present on the entire leasehold.</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
Soil	Steep Slopes in the Moab Field Office (79,045 acres for Moab)	CSU	X				Construction on slopes greater than 30 percent would be avoided. If the action cannot be avoided, a proposal would include an erosion control strategy, reclamation and site plan with a detailed survey and design completed by a certified engineer. This proposal must be approved by the BLM prior to construction and maintenance. Purpose: To minimize watershed damage in fragile soils on steep slopes. Exception: None Modification: None Waiver: None
Soil	Steep Slopes in the Monticello Field Office (29,150 acres in Monticello)	CSU	X				If surface-disturbing activities cannot be avoided on slopes between 21 percent and 40 percent, an erosion control plan would be required. The plan must be approved by the BLM prior to construction and maintenance and include the following: 1) an erosion control strategy and 2) A BLM accepted and/or approved survey and design. Purpose: To protect soils and avoid erosion on sloped embankments. Exception: None Modification: None Waiver: None
Soil	Steep Slopes in the Monticello Field Office (42,339 acres in Monticello)	NSO	X				New surface-disturbing activities are not allowed on slopes greater than 40 percent. Purpose: To protect soils, avoid erosion, and maintain public health and safety in sloped embankments. Exception: If after an analysis, the Authorized Officer determines that it would cause undue or unnecessary degradation to pursue other placement alternatives, surface occupancy in the NSO may be authorized. Additionally, a plan would be submitted by the Operator and approved by the BLM prior to construction and maintenance. Modification: None Waiver: None
Soil	Steep Slopes (181,119 acres)	CSU		X		X	An erosion control plan approved by the BLM would be required on slopes greater than 21 percent prior to construction and maintenance if these activities cannot be avoided. The plan would include the following: 1) an erosion control strategy, and 2) a BLM-accepted access road and well pad survey and design. Purpose: To minimize soil erosion, sedimentation, soil compaction, runoff and associated loss of soil productivity. Exception: General exception applies. Modification: The Authorized Officer may modify the stipulation if it is determined that the project area does not contain slopes greater than 21 percent.

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							Waiver: The Authorized Officer may waive the stipulation if it is verified that steep slopes are not present on the entire leasehold.
Soil	Steep Slopes (46,525 acres)	CSU			X		<p>An erosion control plan approved by the BLM would be required on slopes between 21 percent and 30 percent prior to construction and maintenance if these activities cannot be avoided. The plan would include the following: 1) an erosion control strategy, and 2) a BLM-accepted access road and well pad survey and design.</p> <p>Purpose: To minimize soil erosion, soil compaction, sedimentation, runoff, and associated loss of soil productivity.</p> <p>Exception: None</p> <p>Modification: The Authorized Officer may modify the stipulation if it is determined that the project area does not contain slopes between 21 percent and 30 percent.</p> <p>Waiver: The Authorized Officer may waive the stipulation if it is verified that steep slopes are not present on the entire leasehold.</p>
Soil	Steep Slopes (134,594 acres)	NSO			X		<p>No surface occupancy would be allowed on slopes greater than 30 percent.</p> <p>Purpose: To minimize soil erosion, soil compaction, sedimentation, runoff, and associated loss of soil productivity, and to prevent sedimentation.</p> <p>Exception: None</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Water Resources	Drinking Water Source Protection Zones (Groundwater Protection Zones) (17,362 acres)	NSO		X	X	X	<p>No surface occupancy would be allowed in Drinking Water Source Protection Zones (Groundwater Protection Zones) 1, 2, 3, and 4 as defined by the Utah Division of Drinking Water. Horizontal and directional drilling conducted from outside the NSO area must not penetrate the water bearing geologic units (aquifer) within the protection zone. Where horizontal and directional drilling is conducted from areas outside the NSO area, adequate well construction, completion, and abandonment is required so that the water source is not impacted.</p> <p>Purpose: To protect drinking water source protection zones.</p> <p>Exception: General exception applies.</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Water	Water Resources (50,495 acres)	NSO	X				<p>Allow no surface-disturbing activities within public water reserves, 100-year floodplains, and within 100 meters (330 feet) of riparian areas and springs.</p> <p>Purpose: To protect public water reserves, floodplains, riparian areas, and springs.</p> <p>Exception: The Authorized Officer may grant an exception if: 1) there are no practical alternatives, or 2) impacts could be fully mitigated.</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							Modification: None Waiver: None
Water	Water Resources (69,786 acres)	NSO		X		X	<p>No surface occupancy would be allowed within public water reserves, 100-year floodplains, and within 500 feet of intermittent and perennial streams, rivers, riparian areas, wetlands, water wells, and springs.</p> <p>Purpose: To protect public water reserves, 100-year floodplains, intermittent and perennial streams, rivers, springs, wetlands, riparian areas and water wells.</p> <p>Exception: The Authorized Officer may grant an exception only for access roads and pipelines if: 1) there are no practical alternatives, 2) impacts could be fully mitigated, and 3) proposed operations would not result in unacceptable impacts.</p> <p>Modification: The Authorized Officer may modify the stipulation if it is determined that the project area no longer contains a public water reserve, 100-year floodplains, intermittent and perennial streams, rivers, springs, wetlands, riparian areas, or water wells.</p> <p>Waiver: The Authorized Officer may waive the stipulation if public water reserves, 100-year floodplains, intermittent and perennial streams, rivers, springs, wetlands, riparian areas, or water wells are not present on the entire leasehold.</p>
Water	Water Resources (91,558 acres)	NSO			X		<p>No surface occupancy would be allowed within public water reserves, 100-year floodplains, and within 660 feet of intermittent and perennial streams, rivers, riparian areas, wetlands, water wells, and springs.</p> <p>Purpose: To protect public water reserves, 100-year floodplains, intermittent and perennial streams, rivers, springs, wetlands, riparian areas, and water wells.</p> <p>Exception: None</p> <p>Modification: The Authorized Officer may modify the stipulation if it is determined that the project area no longer contains a public water reserve, 100-year floodplains, intermittent and perennial streams, rivers, springs, wetlands, riparian areas, or water wells.</p> <p>Waiver: The Authorized Officer may waive the stipulation if public water reserves, 100-year floodplains, intermittent and perennial streams, rivers, springs, wetlands, riparian areas, or water wells are not present on the entire leasehold.</p>
Water	Ephemeral Streams (58,545 acres)	NSO		X		X	<p>No surface occupancy would be allowed within 100 feet of ephemeral streams.</p> <p>Purpose: To protect ephemeral streams.</p> <p>Exception: The Authorized Officer may grant an exception if: 1) there are no practical alternatives, 2) impacts could be fully mitigated, and 3) proposed operations would not result in unacceptable impacts.</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							<p>Modification: The Authorized Officer may modify the stipulation if it is determined that the project area does not contain an ephemeral stream.</p> <p>Waiver: The Authorized Officer may waive the stipulation if ephemeral streams are verified as not present on the entire leasehold.</p>
Water	Ephemeral Streams (115,121 acres)	NSO			X		<p>No surface occupancy would be allowed within 200 feet of ephemeral streams.</p> <p>Purpose: To protect the major river systems in the Planning Area.</p> <p>Exception: The Authorized Officer may grant an exception only for access roads and pipelines if: 1) there are no practical alternatives, 2) impacts could be fully mitigated, and 3) proposed operations would not result in unacceptable impacts.</p> <p>Modification: The Authorized Officer may modify the stipulation if it is determined that the project area does not contain an ephemeral stream.</p> <p>Waiver: The Authorized Officer may waive the stipulation if ephemeral streams are verified as not present on the entire leasehold.</p>
Water	Impaired Water Bodies (4,590 acres)	NSO		X		X	<p>No surface occupancy would be allowed within 750 feet of the Colorado River and Fisher Creek.</p> <p>Purpose: To protect impaired water bodies that are not meeting Utah water quality standards.</p> <p>Exception: General exception applies.</p> <p>Modification: The Authorized Officer may modify the list of impaired water bodies protected by this stipulation when water bodies are added or deleted from the List of Impaired Waters.</p> <p>Waiver: The Authorized Officer could waive the stipulation if the factors leading to its inclusion in the lease no longer exist.</p>
Water	Impaired Water Bodies (6,883 acres)	NSO			X		<p>No surface occupancy would be allowed within 1,000 feet of the Colorado River and Fisher Creek.</p> <p>Purpose: To protect impaired water bodies that are not meeting Utah water quality standards.</p> <p>Exception: None</p> <p>Modification: The Authorized Officer may modify the list of impaired water bodies protected by this stipulation when water bodies are added or deleted from the List of Impaired Waters.</p> <p>Waiver: The Authorized Officer could waive the stipulation if the factors leading to its inclusion in the lease no longer exist.</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
Water	Courthouse Wash and Salt Wash Watersheds (113,715 acres)	CSU		X		X	Apply the Baseline CSU stipulation (see Minerals section of this Appendix for Alternatives B and D) to limit the amount of drilling within the Courthouse Wash and Salt Wash watersheds.
Water	Courthouse Wash and Salt Wash Watersheds (113,715 acres)	NSO			X		No surface occupancy would be allowed within the Courthouse Wash and Salt Wash Watersheds. Where horizontal and directional drilling is conducted from areas adjacent to these watersheds, drilling operations would not penetrate the associated groundwater. Purpose: To protect the Courthouse Wash watershed (an important recharge area for the unique ecological system within Arches National Park) and the Salt Wash watershed (an important watershed which drains through Arches National Park). Exception: None Modification: General modification applies. Waiver: General waiver applies.
Water	Courthouse Wash and Salt Wash Watersheds (113,715 acres)	CSU		X		X	Closed loop drilling, the use of tanks for produced water or backflow water, well integrity tests, and a water monitoring plan would be required for operations conducted within the Courthouse Wash and Salt Wash Watersheds. When needed, or as determined by the AO, the operator shall conduct reasonable tests which will demonstrate the mechanical integrity of the down hole equipment. Monitoring would occur prior to, during, and after anticipated mineral development to detect impacts on both surface water and groundwater resources. Purpose: To protect the Courthouse Wash and Salt Wash Watersheds, an important recharge area for the unique ecological system within Arches National Park. Exception: General exception applies. Modification: General modification applies. Waiver: General waiver applies.
Water	Spring Areas (38,056 acres)	CSU		X		X	A hydrologic assessment would be required in identified spring areas prior to conducting any mineral operations. The hydrologic assessment would include a description of the geology and potentially affected aquifers and springs along with a drilling plan that demonstrates how water resources would be protected. A water monitoring plan would also be required. Monitoring would occur prior to, during, and after anticipated mineral development to detect impacts on springs. Purpose: To protect spring areas. Exception: General exception applies. Modification: General modification applies.

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							Waiver: General waiver applies.
Water	Spring Areas (38,056 acres)	NSO			X		No surface occupancy would be allowed within identified spring areas. Purpose: To protect spring areas. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Special Designations: ACEC	Behind the Rocks ACEC (3,911 acres)	NSO	X	X		X	No surface-disturbing activities are allowed in the Behind the Rocks Area of Critical Environmental Concern (ACEC). Purpose: To protect scenic values, cultural resources, and sensitive plants. Exception: General exception applies. Modification: General modification applies. Waiver: General waiver applies.
Special Designations: ACEC	Behind the Rocks ACEC (3,911 acres)	Closed			X		Close the Behind the Rocks ACEC to mineral leasing.
Special Designations: ACEC	Highway 279/Shافر Basin/Long Canyon (12,626 acres)	NSO	X	X			No surface-disturbing activities are allowed in the Highway 279/Shافر Basin/Long Canyon ACEC. Purpose: To protect rare plants, scenic, wildlife, and cultural resources. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Special Designations: ACEC	Highway 279/Shافر Basin/Long Canyon (12,626 acres)	Closed			X		Close the Highway 279/Shافر Basin/Long Canyon ACEC to mineral leasing.
Special Designations: ACEC	Shافر Basin portion of ACEC (8,566 acres)	Closed				X	Close the Shافر Basin portion of the Highway 279/Shافر Basin/Long Canyon ACEC to mineral leasing.
Special Designations:	Highway 279/Long Canyon	NSO				X	No surface occupancy would be allowed within the Highway 279 and Long Canyon portions of the Highway 279/Shافر Basin/Long Canyon ACEC.

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
ACEC	portions of ACEC (4,060 acres)						Purpose: To protect rare plants, scenic, wildlife, and cultural resources. Exception: General exception applies. Modification: General modification applies. Waiver: General waiver applies.
Special Designations: ACEC	Indian Creek ACEC (3,894 acres)	NSO	X				No surface-disturbing activities would be allowed within the Indian Creek ACEC. Purpose: Protect relevant and important scenic values. Exception: The Authorized Officer may grant an exception if activities are short-term or if, after an analysis, it is determined that the project could meet VRM Class I objectives. Modification: None Waiver: None
Special Designations: ACEC	Indian Creek ACEC (3,894 acres)	NSO		X			No surface occupancy would be allowed within the Indian Creek ACEC. Purpose: To protect rare plants, scenic, wildlife, and cultural resources. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Special Designations: ACEC	Indian Creek ACEC (3,894 acres)	Closed			X	X	Close the Indian Creek ACEC to mineral leasing.
Special Designations: ACEC	Lavender Mesa ACEC (649 acres)	NSO	X				No surface-disturbing activities would be allowed within the Lavender Mesa ACEC. Purpose: Protect relevant and important vegetation and visual values. Exception: The Authorized Officer may grant an exception for geophysical exploration if the project does not adversely impact vegetation communities. Modification: None Waiver: None
Special Designations: ACEC	Lavender Mesa ACEC (649 acres)	NSO		X		X	No surface occupancy would be allowed within the Lavender Mesa ACEC. Purpose: To protect relict vegetation. Exception: General exception applies. Modification: General modification applies. Waiver: General waiver applies.
Special Designations:	Lavender Mesa ACEC	Closed			X		Close the Lavender Mesa ACEC to mineral leasing.

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
ACEC	(649 acres)						
Special Designations: ACEC	Shay Canyon ACEC (119 acres)	NSO	X				No surface-disturbing activities would be allowed within the Shay Canyon ACEC. Purpose: Maintain the relevant and important cultural and historic resource values. Exception: The Authorized Officer could grant an exception for geophysical explorations as long as it is consistent with the objectives of the ACEC. Modification: None Waiver: None
Special Designations: ACEC	Shay Canyon ACEC (119 acres)	NSO		X		X	No surface occupancy would be allowed within the Shay Canyon ACEC. Purpose: To protect cultural and historic values. Exception: General exception applies. Modification: General modification applies. Waiver: General waiver applies.
Special Designations: ACEC	Shay Canyon ACEC (119 acres)	Closed			X		Close the Shay Canyon ACEC to mineral leasing.
Special Designations: ACEC	Ten Mile Wash ACEC (4,988 acres)	NSO	X	X		X	No surface occupancy would be allowed within the Ten Mile Wash ACEC. Purpose: To protect cultural and riparian values. Exception: General exception applies. Modification: General modification applies. Waiver: General waiver applies.
Special Designations: ACEC	Ten Mile Wash ACEC (4,988 acres)	Closed			X		Close the Ten Mile Wash ACEC to mineral leasing.
Special Designations: National Historic Trail	Old Spanish National Historic Trail (22,181 acres)	CSU		X			A visual assessment is required for a 2 mile buffer on both sides of the Old Spanish National Historic Trail (OSNHT) where the visual quality is rated as resource condition Category II. The stipulation would require the lessee to maintain the moderate setting of the trail at these locations. Purpose: To protect the setting of the resource condition Category II sites along the OSNHT. Exception: The Authorized Officer may grant an exception if the proposed project is not within view of a resource condition Category II site. Modification: The Authorized Officer may modify the stipulation to match any changes based on updated information regarding resource condition categories.

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							Waiver: The Authorized Officer may waive the stipulation if it is determined that the OSNHT does not exist within the lease area.
Special Designations: National Historic Trail	Old Spanish National Historic Trail (71,439 acres)	NSO			X		<p>No surface occupancy would be allowed within a 2 mile buffer on both sides of the Congressionally Designated OSNHT.</p> <p>Purpose: To protect the setting along the OSNHT.</p> <p>Exception: The Authorized Officer may grant an exception if it can be demonstrated that the mineral activity would not cause impacts or would have negligible impacts to the site or setting (e.g., where topography, changes in elevation, etc.) would physically isolate development from impacting the site or setting.</p> <p>Modification: The Authorized Officer may modify the stipulation to match any changes based on updated information regarding resource condition categories.</p> <p>Waiver: The Authorized Officer may waive the stipulation if it is determined that the OSNHT does not exist within the lease area.</p>
Special Designations: National Historic Trail	Old Spanish National Historic Trail High Potential Sites and Segments (39,404 acres)	CSU				X	<p>A visual assessment of lands within 2 miles of three high potential sites along the OSNHT (Kane Springs, Looking Glass Rock, and Colorado River Crossing near Moab) would be required. A proposed mineral operation must not attract the attention of the casual observer from the OSNHT.</p> <p>A visual assessment of lands within 2 miles of two high potential segments along the OSNHT (Moab Trail and Mule Shoe) would be required. A proposed mineral operation would not result in long-term impairment of the OSNHT viewshed from the perspective of the casual observer from the OSNHT.</p> <p>A visual assessment of lands within 2 miles of the south side of the Blue Hills high potential segment along the OSNHT would be required. A proposed mineral operation would not result in long-term impairment of the OSNHT viewshed from the perspective of the casual observer from the OSNHT. The existing Class B roads that cross the stipulated area could be utilized as a corridor for the transportation of potash (either by pipeline or truck) from a PLA to a PPFA and are not subject to this stipulation.</p> <p>Purpose: To protect the setting along high potential sites and segments of the OSNHT.</p> <p>Exception: The Authorized Officer may grant an exception if the proposed project is not within view of a high potential site or segment as stipulated.</p> <p>Modification: The Authorized Officer may modify the stipulation to match any changes based on updated information.</p> <p>Waiver: The Authorized Officer may waive the stipulation if it is determined that high potential sites and segments of the OSNHT do not exist within the lease area.</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
Special Designations: Wild and Scenic Rivers	Suitable WSR Segments (19,347 acres)	NSO	X	X		X	No surface occupancy would be allowed within suitable WSR segments along the Colorado and Green Rivers (except for Colorado River Segment #3 in Monticello – see below). Purpose: To protect riparian, wildlife, scenic, and recreational values along the major river corridors. Exception: General exception applies. Modification: General modification applies. Waiver: General waiver applies.
Special Designations: Wild and Scenic Rivers	Suitable WSR Segments (19,347 acres)	Closed			X		Suitable WSR segments along the Colorado and Green Rivers would be closed to mineral leasing.
Special Designations: Wild and Scenic River	Suitable WSR Segment #3 along the Colorado River (Monticello) (753 acres)	Closed	X	X	X	X	Suitable WSR Segment #3 along the Colorado River in Monticello would be closed to mineral leasing.
Special Status Species	BLM Sensitive Plant Habitat (61,591 acres)	CSU		X	X	X	A survey must be conducted by a qualified botanist within the habitats for the following plants: Alcove rock daisy, Canyonlands lomatium, Cisco milkvetch, Entrada rushpink, Jane's globemallow, Paradox breadroot, Stage station milkvetch, and Trotter's oreoxsis. Plants will be avoided where identified by surveys. Cisco milkvetch plants identified through surveys would be avoided by 300 feet. Purpose: To protect BLM sensitive plants. Exception: General exception applies. Modification: General modification applies. Waiver: General waiver applies.
Vegetation	Sagebrush/ Steppe Habitat (11,269 acres)	CSU		X		X	Apply the Baseline CSU stipulation to minimize impacts in sagebrush/steppe habitat in areas with moderately high to very high ecological intactness (see Minerals section of this appendix for Alternative B).
Vegetation	Sagebrush/ Steppe Habitat Alternatives B1 and D	CSU		X		X	Compensatory mitigation outside the area of impact would be required within PPFAs for any surface disturbance within sagebrush steppe habitat. One acre of rehabilitation or an amount to be determined of an equal value to the impacted resource would be required for each acre of disturbance (see Minerals section of this appendix for Alternative B, PPFAs).

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
	(8,781 acres)						Purpose: To enhance sagebrush steppe habitat, an important wildlife forage species. Exception: General exception applies. Modification: The Authorized Officer may modify the stipulation if it is determined that the project area does not contain sagebrush steppe habitat. Waiver: The Authorized Officer may waive the stipulation if it can be verified that sagebrush steppe habitat is not present.
Vegetation	Sagebrush/ Steppe Habitat (68,272 acres)	CSU			X		Apply the Baseline CSU stipulation to minimize impacts in sagebrush/steppe habitat (see Minerals section of this appendix for Alternative C).
Visual Resources	VRI Class II areas designated as VRM Class III (146,960 acres)	CSU		X	X	X	Apply the Baseline CSU (see Minerals section of this appendix for Alternatives B and C) to all VRI Class II areas within the Moab Field Office that are designated as VRM Class III.
Visual Resources	VRM Class I Areas (13,417 acres)	NSO	X	X			No surface occupancy would be allowed in VRM Class I areas. Purpose: To protect high quality visual resources. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Visual Resources	VRM Class I Areas (13,417 acres)	Closed			X	X	VRM Class I areas would be closed to mineral leasing.
Visual Resources	Scenic Driving Corridors (44,953 acres)	CSU	X				Surface-disturbing activities within the corridor (0.5 miles from center line) must meet VRM II class objectives. Roads include Highways 128, 313, 279, and 211, Needles Overlook, Anticline Overlook, and Lockhart Basin (including the/Kane Creek Road). Purpose: To protect the visual resources along scenic corridors. Exception: The Authorized Officer may grant an exception if: 1) a viewshed analysis indicates no impairment of the visual resources from the driving corridor, or 2) the action is determined to be consistent and compatible with protection or enhancement of the resource values or the use would provide suitable opportunities for public enjoyment of these resources. Modification: None

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							Waiver: None
Visual Resources	Scenic Driving Corridors (156,067 acres)	NSO		X			<p>No surface occupancy would be allowed within the mapped viewshed of Scenic Backways and Byways as designated by the State of Utah and shall not exceed 1 mile from centerline. The Scenic Backways and Byways include Highways 128, 313, 279, and 211, as well as Needles Overlook, Anticline Overlook, and Lockhart Basin (including the Kane Creek Road).</p> <p>Purpose: To protect high quality visual resources along State Scenic Backways and Byways.</p> <p>Exception: None</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Visual Resources	Scenic Driving Corridors (267,524 acres)	NSO			X		<p>No surface occupancy would be allowed within the mapped viewshed of Scenic Backways and Byways designated by the State of Utah and shall not exceed 2 miles from centerline. The Scenic Backways and Byways include Highways 128, 313, 279, and 211, as well as Needles Overlook, Anticline Overlook, and Lockhart Basin (including the Kane Creek Road).</p> <p>Purpose: To protect high quality visual resources along State Scenic Backways and Byways.</p> <p>Exception: None</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies</p>
Visual Resources	Scenic Driving Corridors (156,067 acres)	NSO				X	<p>No surface occupancy would be allowed within the mapped viewshed of Scenic Backways and Byways designated by the State of Utah and shall not exceed 1 mile from centerline. The Scenic Backways and Byways include Highways 128, 313, 279, and 211, as well as Needles Overlook, Anticline Overlook, and Lockhart Basin (including the Kane Creek Road).</p> <p>Purpose: To protect high quality visual resources along State Scenic Backways and Byways.</p> <p>Exception: The Authorized Officer may grant an exception if it could be demonstrated using visual analysis that the proposed operation would not be visible from the State Scenic corridors.</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Visual Resources	VRM Class II Areas	CSU	X				<p>Surface-disturbing activities must meet the objectives of VRM Class II.</p> <p>Purpose: To protect high quality visual resources.</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
	(324,721 acres)						Exception: The Authorized Officer may grant an exception if the level of change to the landscape from the proposed operation would be low. Operations may be seen, but should not attract attention of the casual observer. Any change to the landscape must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. Modification: None Waiver: None
Visual Resources	VRM II Areas (324,721 acres)	NSO		X	X		No surface occupancy would be allowed within VRM Class II areas. Purpose: To protect high quality visual resources. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Visual Resources	VRM II Areas (324,721 acres)	NSO				X	No surface occupancy would be allowed within VRM Class II areas. Purpose: To protect high quality visual resources. Exception: The Authorized Officer may grant an exception if it could be demonstrated using visual analysis that the proposed operation would not result in long-term visible impairment from key observation points as defined by the BLM VRM Manual. Modification: General modification applies. Waiver: General waiver applies.
Visual Resources	Viewsheds of Arches and Canyonlands National Parks (166,380 acres)	NSO		X			No surface occupancy would be allowed within VRM Class II areas surrounding Arches National Park. No surface occupancy would be allowed within VRI Class II areas surrounding Arches National Park. No surface occupancy would be allowed within VRM Class II area along the northern boundary of Canyonlands National Park. No surface occupancy would be allowed within VRM Class II area along the eastern boundary of Canyonlands National Park. Purpose: To protect visual resources on BLM lands as well as National Park viewsheds. Exception: None Modification: General modification applies. Waiver: General waiver applies.

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
Visual Resources	Viewsheds of Arches and Canyonlands National Parks (188,154 acres)	Closed			X	X	VRM Class II areas surrounding Arches National Park would be closed to mineral leasing. VRI Class II areas surrounding Arches National Park would be closed to mineral leasing. VRM Class II areas on the northern boundary of Canyonlands National Park would be closed to mineral leasing. BLM lands along the entire eastern boundary of Canyonlands National Park to a distance of 3 miles from the Park boundary would be closed to mineral leasing.
Visual Resources	Viewsheds of Arches National Park (34,243 acres)	NSO			X		No surface occupancy would be allowed within the viewshed from the northern side of Arches National Park that is outside the VRI Class II areas. Purpose: To protect visual resources on BLM lands, as well as the Arches National Park viewshed. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Visual Resources	Viewsheds of Canyonlands National Parks (3,800 acres)	NSO			X	X	No surface occupancy would be allowed within the viewshed from the northern boundary of Canyonlands National Park that is outside the VRM Class II area. Purpose: To protect Canyonlands National Park viewsheds. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Visual Resources	Rimlands of the Green and Colorado Rivers (54,270 acres)	NSO		X			No surface occupancy would be allowed within a 1 mile setback from the rims of the Colorado and Green Rivers. Purpose: To protect high quality visual resources along the rims of the Green and Colorado Rivers. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Visual Resources	Rimlands of the Green and Colorado Rivers (99,168 acres)	NSO			X		No surface occupancy would be allowed within a 2 mile setback from the rims of the Colorado and Green Rivers. Purpose: To protect high quality visual resources along the rims of the Green and Colorado Rivers. Exception: None Modification: General modification applies.

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							Waiver: General waiver applies.
Visual Resources	Rimlands of the Green and Colorado Rivers (99,168 acres)	NSO				X	<p>No surface occupancy would be allowed within a 1 mile setback from the rims of the Colorado and Green Rivers.</p> <p>Purpose: To protect high quality visual resources along the rims of the Green and Colorado Rivers.</p> <p>Exception: The Authorized Officer may grant an exception if a viewshed analysis indicates no impairment of the visual resources of the rims from either the rims or from the rivers.</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Visual Resources - Night Skies	Planning Area	CSU			X		<p>Operators are required to comply with the following:</p> <ol style="list-style-type: none"> 1. Minimize flaring of gas 2. Limit the use of artificial lighting during nighttime operations to only those that are determined necessary for safety 3. Utilize shielding and aiming techniques, as well as limiting the height of light poles to reduce glare and avoid light shining above horizons 4. Direct lights downward onto the task area. The bottom surface of the light fixture should be level, or if unable to be fully level, pointed as close to straight down as possible or shielded to avoid light being projected horizontally 5. Use motion sensors, timers, or manual switching for areas that require illumination but are seldom occupied 6. Reduce lamp brightness and select lights that are not broad spectrum or bluish in color. <p>Purpose: To protect night skies.</p> <p>Exception: The Authorized Officer may grant an exception if actions are necessary for human health and safety. The Authorized Officer could also grant an exception if it could be demonstrated that other options could produce similar reduction in night sky light pollution to those listed above.</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Auditory Management - Soundscape	Lands bordering Arches and	CSU			X	X	<p>Operators are required to comply with the following within 6.1 miles (9,800 meters) of National Parks.</p> <p>Noise mitigation efforts would be implemented with a maximum level of 55 decibels for production equipment (measured from the direction of the Park at a distance of</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
	Canyonlands National Parks (369,519 acres)						350 feet from source). These sound levels could be achieved by replacement diesel engine exhaust silencers (mufflers) noise barriers, and other noise control measures. Purpose: To protect the soundscapes of the National Parks. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Auditory Management - Soundscape	Lands bordering Arches and Canyonlands National Parks (148,432 acres)	NSO		X			No surface occupancy would be allowed within 2.5 miles of National Park boundaries. Purpose: To reduce auditory impacts from mineral operations to backcountry portions of Arches and Canyonlands National Parks. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Auditory Management - Soundscape	Lands bordering Arches and Canyonlands National Parks (166,099 acres)	NSO			X		No surface occupancy would be allowed within 2.8 miles of National Park boundaries. Purpose: To further reduce auditory impacts from mineral operations to backcountry portions of Arches and Canyonlands National Parks. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Auditory Management - Soundscape	Lands bordering Arches and Canyonlands National Parks (148,432 acres)	NSO				X	No surface occupancy would be allowed within 2.5 miles of National Park boundaries. Purpose: To reduce auditory impacts from mineral operations to backcountry portions of Arches and Canyonlands National Parks. Exception: The Authorized Officer may grant an exception if it could be demonstrated that the project would not impact National Park soundscapes. Modification: General modification applies. Waiver: General waiver applies.
Wildlife	Lockhart Desert Bighorn Sheep Herd (64,798 acres)	TL	X	X	X	X	No surface-disturbing activities or occupancy would be allowed within habitat for the Lockhart desert bighorn sheep herd from April 1 through June 15 for lambing and from October 15 through December 15 for rutting. Purpose: To minimize disturbance within desert bighorn sheep lambing and rutting habitat.

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							<p>Exception: The Authorized Officer may grant an exception if it is determined that the animals are not present in the project area or the activity can be completed so as to not adversely affect the animals. Routine operation and maintenance are allowed.</p> <p>Modification: The Authorized Officer may modify the stipulation if a portion of the area is not being used for lambing or rutting if the habitat is being utilized outside of stipulation boundaries as lambing and rutting habitat and needs to be protected.</p> <p>Waiver: The Authorized Officer may waive the stipulation if the lambing and rutting habitat is determined to be unsuitable or unoccupied and there is no reasonable likelihood of future use of the lambing or rutting habitat.</p>
Wildlife	Pronghorn Fawning Habitat (85,639 acres) B1 Only	TL		X		X	<p>No surface-disturbing activities or occupancy would be allowed within pronghorn fawning habitat from May 1 to June 15.</p> <p>Purpose: To minimize stress and disturbance during critical pronghorn birthing time.</p> <p>Exception: The Authorized Officer may grant an exception if the operator submits a plan that demonstrates impacts from the proposed action can be adequately mitigated or if it is determined the habitat is not being utilized for fawning in any given year. This stipulation does not apply to the maintenance and operation of existing and ongoing facilities.</p> <p>Modification: The Authorized Officer may modify the stipulation if a portion of the area is not being used for fawning or if the habitat is being utilized outside of stipulation boundaries as crucial fawning habitat and needs to be protected.</p> <p>Waiver: The Authorized Officer may waive the stipulation if the fawning habitat is determined to be unsuitable or unoccupied and there is no reasonable likelihood of future use of the fawning habitat.</p>
Wildlife	Pronghorn Fawning Habitat (99,744 acres) B2 Only	TL	X	X			<p>No surface-disturbing activities or occupancy would be allowed within pronghorn fawning habitat from May 1 to June 15.</p> <p>Purpose: To minimize stress and disturbance during critical pronghorn birthing time.</p> <p>Exception: The Authorized Officer may grant an exception if the operator submits a plan that demonstrates impacts from the proposed action can be adequately mitigated or if it is determined the habitat is not being utilized for fawning in any given year. This stipulation does not apply to the maintenance and operation of existing and ongoing facilities.</p> <p>Modification: The Authorized Officer may modify the stipulation if a portion of the area is not being used for fawning or if the habitat is being utilized outside of stipulation boundaries as crucial fawning habitat and needs to be protected.</p> <p>Waiver: The Authorized Officer may waive the stipulation if the fawning habitat is determined to be unsuitable or unoccupied and there is no reasonable likelihood of future use of the fawning habitat.</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
Wildlife	Pronghorn Habitat (253,292 acres)	TL			X		<p>No surface-disturbing activities or occupancy would be allowed within pronghorn habitat from May 1 to June 15.</p> <p>Purpose: To minimize stress and disturbance to pronghorn.</p> <p>Exception: The Authorized Officer may grant an exception if the operator submits a plan that demonstrates impacts from the proposed action can be adequately mitigated or if it is determined the habitat is not being utilized. This stipulation does not apply to the maintenance and operation of existing and ongoing facilities.</p> <p>Modification: The Authorized Officer may modify the stipulation if a portion of the area is not being used or if the habitat is being utilized outside of stipulation boundaries.</p> <p>Waiver: The Authorized Officer may waive the stipulation if the habitat is determined to be unsuitable or unoccupied and there is no reasonable likelihood of future use of the habitat.</p>
Wildlife	Pronghorn Habitat (14,105 acres) B1 Only	CSU		X		X	<p>Compensatory mitigation outside the area of impact would be required in PPFAs within pronghorn habitat. Water developments, habitat improvements, and other applicable measures adequate to compensate for the loss of pronghorn habitat would be required when production facilities are constructed (see Minerals section, Alternatives B and D, PPFAs).</p> <p>Purpose: To maintain viable pronghorn habitat.</p> <p>Exception: None</p> <p>Modification: General modification applies.</p> <p>Waiver: General waiver applies.</p>
Wildlife	Desert Bighorn Sheep Lambing and Rutting Habitat and Migration Corridors (101,461 acres)	NSO	X				<p>No surface-disturbing activities would be allowed within desert bighorn sheep lambing and rutting habitat and migration corridors.</p> <p>Purpose: To minimize disturbance within desert bighorn lambing habitat and migration corridors.</p> <p>Exception: The Authorized Officer may grant an exception within migration corridors, for pipeline and road construction and geophysical exploration for oil and gas development from June 16 through October 14 and from December 16 through March 31. The Authorized Officer may also grant an exception if the operator submits a plan, which demonstrates that impacts from the proposed action can be adequately mitigated.</p> <p>Modification: The Authorized Officer may modify the stipulation if a portion of the area is 1) not being used as desert bighorn lambing habitat or migration corridors, 2) if habitat is being utilized outside of stipulation boundaries for and needs to be protected.</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							Waiver: The Authorized Officer may waive the stipulation if the habitat is determined as unsuitable for lambing or migration and there is no reasonable likelihood of future use as desert bighorn lambing and/or rutting habitat and migration corridors.
Wildlife	Desert Bighorn Sheep Lambing and Rutting Habitat (107,220 acres)	CSU		X		X	<p>Drilling operations and permanent facilities would not be allowed within desert bighorn sheep lambing and rutting habitat. Geophysical operations and the construction of roads and pipelines would be allowed during specified timeframes as follows:</p> <ol style="list-style-type: none"> 1. Geophysical exploration would be allowed throughout the lambing and rutting habitat (except for source points in Mineral, Hell Roaring, Spring, and Ten Mile Canyons and 100 feet from their rims) if it occurred between June 16 and October 15 or December 15 through March 31. Receiver lines could be placed throughout the habitat. 2. Road construction necessary to exercise mineral lease rights and where no other access is feasible would be allowed throughout the habitat if the construction occurred between June 16 and October 15 or December 15 through March 31. Roads constructed for minerals within this habitat would not be available for public use. Furthermore, these roads would be reclaimed to a natural state at the conclusion of the project. 3. Pipeline construction and placement would be allowed throughout the lambing and rutting habitat if construction occurred between June 16 and October 15 or December 15 through March 31. <p>Purpose: To minimize disturbance within desert bighorn lambing and rutting habitat.</p> <p>Exception: General exception applies.</p> <p>Modification: The Authorized Officer may modify the stipulation if a portion of the area is 1) not being used as desert bighorn lambing or rutting habitat, and 2) if habitat is being utilized outside of stipulation boundaries for lambing and rutting and needs to be protected.</p> <p>Waiver: A waiver may be granted if the habitat is determined as unsuitable for lambing or rutting and there is no reasonable likelihood of future use as desert bighorn sheep lambing and/or rutting habitat.</p>
Wildlife	Desert Bighorn Sheep Habitat within PPFAs (9,875 acres) B1 Only	CSU		X		X	<p>Compensatory mitigation outside the area of impact would be required in PPFAs within desert bighorn sheep habitat. Water developments, habitat improvements, and other applicable measures adequate to compensate for the loss of desert bighorn sheep habitat would be required when production facilities are constructed (see Minerals section, Alternatives B and D, PPFAs).</p> <p>Purpose: To maintain viable desert bighorn sheep habitat.</p> <p>Exception: None</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							Modification: General modification applies. Waiver: General waiver applies.
Wildlife	Desert Bighorn Sheep Habitat (247,127 acres) B1 Only	CSU		X		X	Apply the Baseline CSU stipulation to the desert bighorn sheep habitat (except for a small portion located within the PPFAs). See Minerals section, Alternatives B and D.
Wildlife	Desert Bighorn Sheep Habitat (257,002 acres) B2 Only	CSU		X			Apply the Baseline CSU stipulation to the desert bighorn sheep habitat. See Minerals section, Alternative B.
Wildlife	Desert Bighorn Sheep Lambing and Rutting Habitat (107,220 acres)	NSO			X		No surface occupancy would be allowed within desert bighorn sheep lambing and rutting habitat. Purpose: To protect desert bighorn sheep lambing and rutting habitat. Exception: None Modification: General modification applies. Waiver: General waiver applies.
Wildlife	Desert Bighorn Sheep Habitat (149,782 acres)	CSU			X		Apply the Baseline CSU stipulation to the desert bighorn sheep habitat outside of lambing and rutting habitat (see Minerals section, Alternative C).
Wildlife	Deer and Elk Crucial Winter Habitat (82,547 acres)	TL	X				No surface-disturbing activities would be allowed within deer and elk crucial winter habitat from November 15 to April 15. This stipulation does not apply to the maintenance and operation of existing and ongoing facilities. Purpose: To minimize stress and disturbance to deer and elk during critical winter months. Exception: The Authorized Officer may grant an exception if the operator submits a plan that demonstrates impacts from the proposed action can be adequately mitigated or it is determined the habitat is not being utilized during the winter period for any given year. Modification: The Authorized Officer may modify the stipulation if: 1) a portion of the area is not being used as winter range by deer/elk, or 2) habitat is being utilized outside of stipulation boundaries as winter range and needs to be protected, or 3) the migration patterns have changed causing a difference in the season of use.

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
							Waiver: The Authorized Officer may waive the stipulation if the crucial winter habitat is unsuitable or unoccupied during winter months by deer/elk and there is no reasonable likelihood of future winter range use.
Wildlife	Deer and Elk Crucial Winter Habitat (125,995 acres)	TL		X		X	<p>No surface-disturbing activities would be allowed within deer and elk crucial winter habitat from November 15 to April 15. This stipulation does not apply to the maintenance and operation of existing and ongoing facilities.</p> <p>Purpose: To minimize stress and disturbance to deer and elk during critical winter months.</p> <p>Exception: The Authorized Officer may grant an exception if the operator submits a plan that demonstrates impacts from the proposed action can be adequately mitigated or it is determined the habitat is not being utilized during the winter period for any given year.</p> <p>Modification: The Authorized Officer may modify the stipulation if: 1) a portion of the area is not being used as winter habitat by deer/elk, or 2) habitat is being utilized outside of stipulation boundaries as crucial winter habitat and needs to be protected, or 3) the migration patterns have changed, causing a difference in the season of use.</p> <p>Waiver: The Authorized Officer may waive the stipulation if the crucial winter habitat is unsuitable or unoccupied during winter months by deer/elk and there is no reasonable likelihood of future winter range use.</p>
Wildlife	Deer and Elk Crucial and Substantial Winter Habitat (134,625 acres)	TL			X		<p>No surface-disturbing activities would be allowed within deer and elk crucial winter habitat from November 15 to April 15. This stipulation does not apply to the maintenance and operation of existing and ongoing facilities.</p> <p>Purpose: To minimize stress and disturbance to deer and elk during critical winter months.</p> <p>Exception: The Authorized Officer may grant an exception if the operator submits a plan that demonstrates impacts from the proposed action can be adequately mitigated or it is determined the habitat is not being utilized during the winter period for any given year.</p> <p>Modification: The Authorized Officer may modify the stipulation if: 1) a portion of the area is not being used as winter habitat by deer/elk, or 2) habitat is being utilized outside of stipulation boundaries as crucial or substantial winter habitat and needs to be protected, or 3) the migration patterns have changed causing a difference in the season of use.</p> <p>Waiver: The Authorized Officer may waive the stipulation if the crucial and substantial winter habitat is unsuitable or unoccupied during winter months by deer/elk and there is no reasonable likelihood of future winter range use.</p>

Resource of Concern	Applicable Area	Stip. Code	Alternative				Stipulation Description
			A	B	C	D	
Wildlife	Deer and Elk Fawning and Calving Grounds (8,354 acres)	TL	X	X	X	X	<p>No surface-disturbing activities would be allowed within deer and elk fawning and calving habitat from May 15 and June 30. This stipulation does not apply to the maintenance and operation of existing and ongoing facilities.</p> <p>Purpose: To minimize stress and disturbance during this critical period.</p> <p>Exception: The Authorized Officer may grant an exception if the operator submits a plan which demonstrates that impacts from the proposed action can be adequately mitigated or it is determined the habitat is not being utilized during the critical period for any given year.</p> <p>Modification: The Authorized Officer may modify the stipulation if: 1) a portion of the area is not being used as fawning and calving habitat, or 2) the habitat is being utilized outside of stipulation boundaries and needs to be protected, or 3) the migration patterns have changed causing a difference in the season of use.</p> <p>Waiver: The Authorized Officer may waive the stipulation if the fawning and calving habitat is unsuitable or unoccupied during winter months by deer/elk and there is no reasonable likelihood of future winter range use.</p>
Wildlife	Deer and Elk Crucial Winter Habitat (125,995 acres)	CSU		X		X	Apply the Baseline CSU stipulation (see Minerals section, Alternatives B and D) throughout deer and elk crucial winter habitat.
Wildlife	Deer and Elk Crucial and Substantial Winter Habitat (134,625 acres)	CSU			X		Apply the Baseline CSU stipulation (see Minerals section, Alternative C) throughout deer and elk crucial and substantial winter habitat.

Table A-2. Mineral Lease Notices

Resource of Concern	Applicable Area	Alternative				Lease Notice Description
		A	B	C	D	
Air Quality Regional Ozone Formation Controls	Planning Area	X				<p>The lessee/operator is given notice that in order to mitigate any potential impact mineral development emissions may have on regional ozone formation, the following Best Management Practices (BMPs) would be required for any development projects:</p> <ul style="list-style-type: none"> • Tier II or better drilling rig engines. • Stationary internal combustion engine standard of 2g NOx/bhp-hr for engines less than 300 horsepower (HP) and 1g NOx/bhp-hr for engines greater than 300 HP.

Resource of Concern	Applicable Area	Alternative				Lease Notice Description
		A	B	C	D	
						<ul style="list-style-type: none"> Low bleed or no bleed pneumatic controller. Dehydrator volatile organic compound (VOC) emission controls to +95 percent efficiency. Tank VOC emission controls to +95 percent efficiency.
Air Quality Air Quality Analysis	Planning Area	X	X	X	X	The lessee/operator is given notice that prior to project-specific approval, additional air quality analyses may be required to comply with the National Environmental Policy Act, Federal Land Policy and Management Act, and/or other applicable laws and regulations. Analyses may include dispersion modeling for deposition and visibility impacts analysis, control equipment determinations, and/or emission inventory development. These analyses may result in the imposition of additional project-specific air quality control measures.
Cultural Resources	Planning Area		X	X	X	The lessee/operator is given notice that measures to mitigate the potential impacts to TCPs or cultural plants identified through consultation may be required. Mitigation would be developed through further consultation with affected groups, which may include measures to maintain the viewshed and intrinsic values, as well as the auditory, visual, and aesthetic settings of the resources.
Cultural Resources	Planning Area		X	X	X	The lessee/operator is given notice that a viewshed assessment would be required for those cultural sites that receive a high degree of visitor use or properties of traditional religious and cultural importance to a Native American tribe. If the assessment shows that the project would have adverse effects to the historic properties, the project may require relocation. The Historic Properties Visual Assessment for Effect Determination Worksheet would be utilized for the viewshed assessment.
Cultural Resources	High Potential for Cultural Sites (135,759 acres)		X	X	X	The lessee/operator is given notice that in areas of high potential for cultural site occurrence there is a higher likelihood of encountering cultural resource concerns (i.e., potential adverse effects) that may require archaeological monitoring, ethnographic data collection, data recovery, and mitigation of historic properties in order to exercise lease rights.
Special Designations: National Historic Trail	Old Spanish National Historic Trail (71,439 acres)				X	The lessee/operator is given notice that lands in this lease are crossed by the Old Spanish National Historic Trail (Old Spanish Trail Recognition Act of 2002, [Old Spanish Trail PLO 107-325]). Modifications to the Surface Use Plan of Operations may be required in order to protect the historic integrity of the trail. The Lease Notice would be applied to 2 miles on either side of the trail. Coordination with the National Park Service by the BLM may be necessary.
Colorado River Endangered Fish	Colorado River, Green River, and all associated back waters (19,198 acres)	X	X	X	X	The lessee/operator is given notice in order to minimize effects to critical habitats of endangered fish in the Colorado and Green Rivers, surface-disturbing activities within the 100-year floodplain of the Colorado River, Green River, and all associated back waters would not be allowed. Other avoidance and minimization measures include:

Resource of Concern	Applicable Area	Alternative				Lease Notice Description
		A	B	C	D	
						<ul style="list-style-type: none"> • Surveys would be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individuals. Lease activities would require monitoring throughout the duration of the project. • To ensure desired results are being achieved, minimization measures would be evaluated and, if necessary, Section 7 consultation reinitiated. • Water production would be managed to ensure maintenance or enhancement of riparian habitat. • Avoid loss or disturbance of riparian habitats. • Conduct watershed analysis for leases in designated critical habitat and overlapping major tributaries in order to determine toxicity risk from permanent facilities. • Implement the Utah Oil and Gas Pipeline Crossing Guidance. In areas adjacent to 100-year floodplains, particularly in systems prone to flash floods, analyze the risk for flash floods to impact facilities, and use closed loop drilling, and pipeline burial or suspension according to the Utah Oil and Gas Pipeline Crossing Guidance to minimize the potential for equipment damage and resulting leaks or spills. • Water depletions from any portions of the Upper Colorado River drainage basin are considered to adversely affect and adversely modify the critical habitat of the endangered fish species (Bonytail, Colorado pikeminnow, Humpback chub, and Razorback sucker). Section 7 consultation would be completed with the U.S. Fish and Wildlife Service (USFWS) prior to any such water depletions. • Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA.
Mexican Spotted Owl (MSO)	MSO Habitat (175,304 acres)	X	X	X	X	<p>The lessee/operator is given notice that the lands in this parcel contain suitable or designated Critical Habitat for MSO. In order to protect MSO habitat and avoid negative impacts to the species, actions would be avoided or restricted that may cause stress and disturbance during nesting and rearing of their young. Appropriate measures would depend on whether the action is temporary or permanent and whether it occurs within or outside the owl nesting season. A temporary action is completed prior to the following breeding season leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding season and/or causes a loss of owl habitat or displaces owls through disturbances (i.e., creation of a permanent structure). Current avoidance and minimization measures include the following:</p> <ul style="list-style-type: none"> • Surveys would be required prior to implementation of the proposed action. All surveys must be conducted by qualified individual(s) acceptable to the BLM. Assess habitat suitability for both nesting and foraging using accepted habitat models in conjunction with field reviews. Apply the conservation measures

Resource of Concern	Applicable Area	Alternative				Lease Notice Description
		A	B	C	D	
						<p>below if project activities occur within 0.5 mile of suitable owl habitat. Determine potential effects of actions to owls and their habitat.</p> <ul style="list-style-type: none"> Document type of activity, acreage and location of direct habitat impacts, type and extent of indirect impacts relative to location of suitable owl habitat. Document if action is temporary or permanent. Activities may require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures would be evaluated, and, if necessary, Section 7 consultation reinitiated. Any activity that includes water production should be managed to ensure maintenance of enhancement of riparian habitat. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in canyon habitat suitable for MSO nesting. <p>For all temporary actions that may impact owls or suitable habitat:</p> <ol style="list-style-type: none"> If the action occurs entirely outside of the owl breeding season from March 1 through August 31, and leaves no permanent structure or permanent habitat disturbance, the action can proceed without an occupancy survey. If the action would occur during a breeding season, a survey for owls is required prior to commencing the activity. If owls are found, the activity should be delayed until outside of the breeding season. Rehabilitate access routes created by the project through, such means as raking out scars, re-vegetation, gating access points, etc. <p>For all permanent actions that may impact owls or suitable habitat:</p> <ol style="list-style-type: none"> Survey two consecutive years for owls, according to accepted protocol prior to commencing activities. If owls are found, no disturbing actions would occur within 0.5 miles of an identified site. If nest site is unknown, no activity would occur within the designated current and historic Protected Activity Center (PAC). Avoid permanent structures within 0.5 mile of suitable habitat unless surveyed and not occupied. Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at 0.5 mile from suitable habitat, including canyon rims. Placement of permanent noise-generating facilities should be contingent upon a noise analysis to ensure noise does not encroach upon a 0.5 mile buffer for suitable habitat, including canyon rims. Limit disturbances to and within suitable habitat by staying on designated and/or approved routes. Limit new access routes created by the project.

Resource of Concern	Applicable Area	Alternative				Lease Notice Description
		A	B	C	D	
						7. Modifications to the Surface Use Plan of Operations may be required in order to protect the MSO and/or habitat in accordance with Section 6 of the lease terms, the ESA, and the regulations at 43 Code of Federal Regulations (CFR) 3101.1-2.
Southwestern Willow Flycatcher	Southwestern Willow Flycatcher Habitat (riparian areas) (12,155 acres)	X	X	X	X	<p>The lessee/operator is given notice that the lands in this parcel contains riparian habitat within the range for southwestern willow flycatcher. In order to protect southwestern willow flycatcher habitat and avoid negative impacts to the species, actions would be avoided or restricted that may cause stress and disturbance during nesting and rearing of their young. Appropriate measures would depend on whether the action is temporary or permanent, and whether it occurs within or outside the nesting season. A temporary action is completed prior to the following breeding season leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding season and/or causes a loss of habitat or displaces flycatchers through disturbances, i.e., creation of a permanent structure. Current avoidance and minimization measures include the following:</p> <ol style="list-style-type: none"> 1. Surveys would be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individual(s) and be conducted according to protocol. 2. Activities would require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures would be evaluated and, if necessary, Section 7 consultation reinitiated. 3. Water production would be managed to ensure maintenance or enhancement of riparian habitat. 4. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable riparian habitat. Ensure that such directional drilling does not intercept or degrade alluvial aquifers. 5. Activities would maintain a 300 feet buffer from suitable riparian habitat year long. 6. Activities within 0.25 mile of occupied breeding habitat would not occur during the breeding season of April 15 to August 15. 7. Ensure that water extraction or disposal practices do not result in change of hydrologic regime that would result in loss or degradation of riparian habitat. 8. Re-vegetate with native species all areas of surface disturbance within riparian areas and/or adjacent land. 9. Avoid loss or disturbance of riparian habitats. <p>Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA.</p>

Resource of Concern	Applicable Area	Alternative				Lease Notice Description
		A	B	C	D	
Yellow-billed Cuckoo	Yellow-billed Cuckoo Habitat (riparian areas) (12,155 acres)	X	X	X	X	<p>The lessee/operator is given notice that the lands in or adjacent to this parcel contain potentially suitable habitat that falls within the range for western yellow-billed cuckoo, a Federally listed species. Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend whether the action is temporary or permanent, and whether it occurs within or outside the breeding and nesting season. A <u>temporary</u> action is completed prior to the following breeding season, leaving no permanent structures and resulting in no permanent habitat loss. A <u>permanent</u> action could continue for more than one breeding season and/or cause a loss of habitat or displace western yellow-billed cuckoos through disturbances. The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act. Integration of and adherence to these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Endangered Species Act, Section 7 consultation at the permit stage. Avoidance and minimization measures include the following:</p> <ol style="list-style-type: none"> 1. Habitat suitability within the parcel and/or within a 0.5 mile buffer of the parcel will be identified prior to lease development to identify potential survey needs. Habitat suitability should be determined in accordance with <i>Guidelines for the identification of suitable habitat for WYBCU in Utah</i>. 2. Protocol Breeding Season Surveys will be required in suitable habitats prior to operations unless species occupancy and distribution information is complete and available. All Surveys must be conducted by permitted individual(s), and be conducted according to protocol. 3. For all temporary actions that may impact cuckoo or suitable habitat: <ol style="list-style-type: none"> a. If action occurs entirely outside of the cuckoo breeding season (June 1 – August 31), and leaves no structure or habitat disturbance, action can proceed without a presence/absence survey. b. If action is proposed between June 1 to August 31, presence/absence surveys for cuckoo will be conducted prior to commencing activity. If cuckoo are detected, activity should be delayed until September 1. c. Eliminate access roads created by the project through such means as raking out scars, revegetation, gating access points, etc. 4. For all permanent actions that may impact cuckoo or suitable habitat: <ol style="list-style-type: none"> a. Protocol level surveys by permitted individuals will be conducted prior to commencing activities. b. If cuckoos are detected, no activity will occur within 0.25 mile of occupied habitat.

Resource of Concern	Applicable Area	Alternative				Lease Notice Description
		A	B	C	D	
						<p>c. Avoid drilling and permanent structures within 0.25 mile of suitable habitat unless absence is determined according to protocol level survey conducted by permitted individual(s).</p> <p>d. Ensure noise levels at 0.25 mile from suitable habitat do not exceed baseline conditions. Placement of permanent noise-generating facilities should be determined by a noise analysis to ensure noise does not encroach upon the 0.25 mile buffer for suitable habitat.</p> <p>5. Temporary or permanent actions will require monitoring throughout the duration of the project to ensure that western yellow-billed cuckoo or its habitat is not affected in a manner or to an extent not previously considered. Avoidance and minimization measures will be evaluated throughout the duration of the project.</p> <p>6. Water produced as by-product of drilling or pumping will be managed to ensure maintenance or enhancement of riparian habitat.</p> <p>7. Where technically or economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling is suitable habitat. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.</p> <p>8. Ensure that water extraction or disposal practices do not result in a change of hydrologic regime that would result in loss or degradation of riparian habitat.</p> <p>9. Re-vegetate with native species all areas of surface disturbance within riparian areas and/or adjacent uplands.</p> <p>Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the U.S. Fish and Wildlife Service between the lease sale stage and lease development stage to ensure continued compliance with the ESA.</p>
Bald Eagles	Nest Sites and Winter Roost Areas within Habitat for Bald Eagles Planning Area	X	X	X	X	<p>The lessee/operator is given notice that the parcel contains habitat for the bald eagle. To protect bald eagle habitat and avoid negative impacts to the species, actions would be avoided or restricted that may cause stress and disturbance during nesting and rearing of their young. Appropriate measures would depend on whether the action is temporary or permanent, and whether it occurs within or outside the bald eagle breeding or roosting season. A temporary action is completed prior to the following breeding or roosting season, leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding or roosting season and/or causes a loss of eagle habitat, or displaces eagles through disturbances, i.e., creation of a permanent structure. Current avoidance and minimization measures include the following:</p> <ol style="list-style-type: none"> 1. Surveys would be required prior to operations, unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individual(s), and be conducted according to protocol. 2. Lease activities would require monitoring throughout the duration of the project.

Resource of Concern	Applicable Area	Alternative				Lease Notice Description
		A	B	C	D	
						<p>3. To ensure desired results are being achieved, minimization measures would be evaluated.</p> <p>4. Water production would be managed to ensure maintenance or enhancement of riparian habitat.</p> <p>5. Temporary activities within 1.0 mile of nest sites would not occur during the breeding season, which lasts from January 1 to August 31, unless the area has been surveyed according to protocol and determined to be unoccupied.</p> <p>6. Temporary activities within 0.5 miles of winter roost areas, (e.g., cottonwood galleries) would not occur during the winter roost season of November 1 to March 31, unless the area has been surveyed according to protocol and determined to be unoccupied.</p> <p>7. No permanent infrastructure would be placed within 1.0 mile of nest sites.</p> <p>8. No permanent infrastructure would be placed within 0.5 miles of winter roost areas.</p> <p>9. Remove big game carrion to 100 feet from on lease roadways occurring within bald eagle foraging range.</p> <p>10. Avoid loss or disturbance to large cottonwood gallery riparian habitats.</p> <p>11. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat. Utilize directional drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such direction drilling does not intercept or degrade alluvial aquifers.</p> <p>12. All areas of surface disturbance within riparian areas and/or adjacent uplands should be re-vegetated with native species.</p> <p>Additional measures may also be employed to avoid or minimize effects to the species between the lease stage and lease development stage.</p>
Golden Eagle	Golden Eagle Nest Sites and Territories Planning Area	X	X	X	X	<p>The lessee/operator is given notice that the parcel contains habitat for the golden eagle. In order to protect the golden eagle habitat, nest sites, and nesting territories, actions would be avoided or restricted that may cause stress and disturbance during nesting and rearing of their young. Appropriate measures would depend on whether the action is temporary or permanent and whether it occurs within or outside the golden eagle breeding season. A temporary action is completed prior to the following breeding or roosting season, leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding or roosting season and/or causes a loss of eagle habitat or displaces eagles through disturbances (i.e., creation of a permanent structure). Current avoidance and minimization measures include the following:</p>

Resource of Concern	Applicable Area	Alternative				Lease Notice Description
		A	B	C	D	
						<ol style="list-style-type: none"> 1. Surveys would be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individual(s), and be conducted according to protocol. 2. Lease activities would require monitoring throughout the duration of the project. 3. To ensure desired results are being achieved, minimization measures would be evaluated. 4. Temporary activities within 0.5 miles of nest sites would not occur during the breeding season from January 1 to August 31, unless the area has been surveyed according to protocol and determined to be unoccupied. 5. No permanent infrastructure would be placed within 0.5 miles of nest sites. 6. Remove big game carrion to 100 feet from on-lease roadways occurring within golden eagle foraging range. 7. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat. Utilize directional drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such direction drilling does not intercept or degrade alluvial aquifers. <p>Additional measures may also be employed to avoid or minimize effects to the species between the lease stage and lease development stage.</p>
Raptors	Raptors Planning Area	X	X	X	X	<p>The lessee/operator is given notice that appropriate seasonal and spatial buffers shall be placed on all known raptor nests in accordance with Utah Field Office Guidelines for Raptor Protection from Human and Land use Disturbances (USFWS 2002) and BMPs for Raptors and their Associated Habitats in Utah (BLM 2006). All construction-related activities will not occur within these buffers if pre-construction monitoring indicates the nests are active, unless a site specific evaluation(survey) for active nests is completed prior to construction and if a BLM wildlife biologist, in consultation with USFWS and UDWR, recommends that activities may be permitted within the buffer. The BLM will coordinate with the USFWS and UDWR and have a recommendation within 3 to 5 days of notification. Any construction activities authorized within a protective (spatial and seasonal) buffer for raptors will require an onsite monitor. Any indication that activities are adversely affecting the raptor and/or its young the on-site monitor will suspend activities and contact the BLM Authorized Officer immediately. Construction may occur within the buffers of inactive nests. Construction activities may commence once monitoring of the active nest site determines that fledglings have left the nest and are no longer dependent on the nest site. Modifications to the Surface Use Plan of Operations may be required in accordance with Section 6 of the lease terms and 43CFR3101.1-2.</p>
Migratory Birds	Migratory Bird Habitat	X	X	X	X	<p>The lessee/operator is given notice that surveys for nesting migratory birds may be required during migratory bird breeding season (April 1 to July 31) whenever surface</p>

Resource of Concern	Applicable Area	Alternative				Lease Notice Description
		A	B	C	D	
	Planning Area					disturbances and/or occupancy is proposed in association with mineral exploration and development within priority habitats. Surveys should focus on identified priority bird species in Utah. Field surveys will be conducted as determined by the authorized officer of the BLM. Based on the result of the field survey, the Authorized Officer will determine appropriate buffers and timing limitations.
Ferruginous Hawk and Burrowing Owl	Ferruginous Hawk and Burrowing Owl Habitat Planning Area	X	X	X	X	The lessee/operator is given notice that no surface disturbances would be conducted during the breeding and nesting season (March 1 to August 31 for burrowing owl and March 1 to August 1 for ferruginous hawk) within spatial buffers (0.25 mile for burrowing owl and 0.5 mile for ferruginous hawk) of known nesting sites.
White-tailed Prairie Dog Gunnison Prairie Dog	White-tailed Prairie Dog Habitat Gunnison Prairie Dog Habitat (6,825 acres)	X	X	X	X	The lessee/operator is given notice that no surface-disturbing activities within 660 feet (200 meters) of active prairie dog colonies identified within prairie dog habitat would be allowed. No permanent aboveground facilities are allowed within the 660-foot buffer.
Special Status Species: Kit Fox	Kit Fox Habitat Planning Area	X	X	X	X	The lessee/operator is given notice that no surface disturbances would be allowed within 660 feet (200 meters) of an occupied natal kit fox den.
Special Status Species: California Condor	California Condor Potential Habitat Planning Area	X	X	X	X	<p>The lessee/operator is given notice that the lands located in this parcel contain potential habitat for the California condor. Avoidance or use restrictions may be placed on portions on areas known or suspected to be used by condors. Application of appropriate measures would depend on whether the action is temporary or permanent, and whether it occurs within or outside potential habitat. A temporary action is completed prior to the following important season of use, leaving for habitat functionality. A permanent action continues for more than one season of habitat use, and/or causes a loss of condor habitat function or displaces condors through continued disturbance (i.e., creation of a permanent structure requiring repetitious maintenance or emits disruptive levels of noise).</p> <p>Current avoidance and minimization measures include the following:</p> <ol style="list-style-type: none"> 1. Surveys would be required prior to operations, unless species occupancy and distribution information is complete and available. All Surveys must be conducted by qualified individual(s) approved by the BLM and must be conducted according to approved protocol. 2. If surveys result in positive identification of condor use, all lease activities would require monitoring throughout the duration of the project to ensure desired results of applied mitigation and protection. Minimization measures would be evaluated during development and, if necessary, Section 7 consultation may be reinitiated.

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						<p>3. Temporary activities within 1.0 mile of nest sites would not occur during the breeding season.</p> <p>4. Temporary activities within 0.5 miles of established roosting sites or areas would not occur during the season of use, which is from August 1 to November 30, unless the area has been surveyed according to protocol and determined to be unoccupied.</p> <p>5. No permanent infrastructure would be placed within 1.0 mile of nest sites.</p> <p>6. No permanent infrastructure would be placed within 0.5 miles of established roosting sites or areas.</p> <p>7. Remove big game carrion to 100 feet from on lease roadways occurring within foraging range.</p> <p>8. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat. Utilize directional drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.</p> <p>9. Re-initiation of Section 7 consultation with the USFWS would be sought immediately if mortality or disturbance to California condors is anticipated as a result of project activities. Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures would be developed and implemented in consultation with the USFWS to ensure continued compliance with the ESA.</p> <p>Additional measures may also be employed to avoid or minimize effects to the species between the lease sale and lease development stages. These additional measures would be developed and implemented in consultation with the USFWS to ensure continued compliance with the ESA.</p>
Jones cycladenia	Potential, suitable, and occupied habitat	X	X	X	X	<p>The lessee/operator is given notice that the lands located in this parcel contain potential habitat for Jones cycladenia.</p> <p>In order to minimize effects to the Federally threatened Jones cycladenia, the BLM, in coordination with the USFWS has developed the following avoidance and minimization measures. Implementation of these measures will help ensure the activities carried out during oil and gas development (including but not limited to drilling, production, and maintenance operations) are in compliance with the ESA. For the purposes of this document, the following terms are so defined: <i>potential habitat</i> is defined as areas that satisfy the broad criteria of the species habitat description, usually determined by preliminary, in-house assessment. <i>Suitable habitat</i> is defined as areas that contain or exhibit the specific components or constituents necessary for plant persistence determined by field inspection and/or surveys; it may or may not contain Jones cycladenia; habitat descriptions can be found in Federal Register Notice and species recovery plan links at</p>

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						<p>http://www.fws.gov/endangered/species/. <i>Occupied habitat</i> is defined as areas currently or historically known to support Jones cycladenia; synonymous with "known habitat." The following avoidance and minimization measures should be included in the Plan of Development:</p> <ol style="list-style-type: none"> 1. Pre-project habitat assessments will be completed across 100 percent of the project disturbance area within potential habitat prior to any ground disturbing activities to determine if suitable Jones cycladenia habitat is present. 2. Species surveys will be conducted within suitable habitat to determine occupancy. Where standard surveys are technically infeasible and otherwise hazardous, due to topography, slope, etc., suitable habitat will be assessed and mapped for avoidance (hereafter, "avoidance areas"); in such cases, 300 foot buffers will be maintained between surface disturbance and avoidance areas. However, site specific distances will need to be approved by USFWS and BLM when disturbance will occur upslope of habitat. Where conditions allow, surveys: <ol style="list-style-type: none"> a. Must be conducted by qualified individuals(s) and according to BLM and Service accepted survey protocols. b. Will be conducted in suitable and occupied habitat for all areas proposed for surface disturbance prior to initiation of project activities and within the same growing season at a time when the plant can be detected (usually April 15 to June 5; however, surveyors should verify that the plant is flowering by contacting a BLM or USFWS botanist or demonstrating that the nearest known population is in flower). c. Will occur within 300 feet from the edge of the proposed right-of-way (ROW) and/or project disturbance for surface pipelines, roads, wellpads, and other facilities requiring removal of vegetation. d. Will include, but not be limited to, plant species lists and habitat characteristics. e. Will be valid until April 15 of the following year. f. Clearance surveys in occupied habitat will be combined with historic plant location data for that particular site to delineate the outer boundary of occupied habitat. The 300 foot avoidance buffer will then be applied to the outer boundary of occupied habitat for that site. This evaluation will occur in coordination with the BLM and Service to ensure that the appropriate buffer is applied to protect both active and dormant Jones cycladenia plants in occupied habitat. g. Electronic copies of clearance survey reports (included appendices) and GIS shape files will be sent no later than December 31st to each of the following: <ul style="list-style-type: none"> - Utah Natural Heritage Program (with copies of NHP field survey forms) - Applicable/affected land owners and/or management agencies

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						<p>- U.S. Fish and Wildlife Service Utah Field Office (mailing address: 2369 West Orton Circle, Suite 50, West Valley City, Utah 84119).</p> <p>3. Design project infrastructure to minimize impacts within suitable habitat:</p> <p>a. Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (avoidance areas) and incorporate 300 foot buffers, in general; however, site-specific distances will need to be approved by USFWS and BLM when disturbance will occur upslope of habitat.</p> <p>b. Reduce well pad size to the minimum needed without compromising safety.</p> <p>c. Where technically and economically feasible, use directional drilling or multiple wells from the same pad.</p> <p>d. Limit new access routes created by the project.</p> <p>e. Roads and utilities should share common ROWs where possible.</p> <p>f. Reduce the width of ROWs and minimize the depth of excavation needed for the road bed; where feasible, use the natural ground surface for the road within habitat.</p> <p>g. Place signing to limit off-road travel in sensitive areas.</p> <p>h. Stay on designated routes and other cleared/approved areas.</p> <p>i. All disturbed areas will be re-vegetated with species native to the region, or seed mixtures approved by the action agency and USFWS.</p> <p>4. Where there is occupied habitat, project infrastructure will be designed to avoid direct disturbance and indirect impacts to populations and to individual plants:</p> <p>a. Follow the above recommendations in Section 3 for project design within suitable habitats.</p> <p>b. To avoid water flow and/or sedimentation into occupied habitat and avoidance areas, silt fences, hay bales, and similar structures or practices will be incorporated into the project design; appropriate placement of fill is encouraged.</p> <p>c. Construction of roads will occur such that the edge of the ROW is at least 300 feet from: 1) any plant, 2) the outer boundary of occupied habitat, and 3) avoidance areas.</p> <p>d. Existing roads will be graveled within 300 feet of occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from April 15 to June 5 (flowering period); dust abatement applications will be comprised of water only.</p> <p>e. The edge of the well pad should be located at least 300 feet away from plants and avoidance areas, in general; however, site specific distances will need to be approved by USFWS and BLM when disturbance will occur upslope of</p>

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						<p>habitat.</p> <p>f. Surface pipelines will be laid such that a 300 foot buffer exists between the edge of the ROW and plants and 300 feet between the edge of ROW and avoidance areas; use stabilizing and anchoring techniques when the pipeline crossed suitable habitat to ensure pipelines don't move towards the population; site specific distances will need to be approved by USFWS and BLM when disturbance will occur upslope of habitat.</p> <p>g. Construction activities will not occur within occupied habitat.</p> <p>h. Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging temporary fencing, rebar, etc.</p> <p>i. A qualified botanist will be onsite during construction to monitor the surface disturbance activity and assist with implementation of applicable conservation measures.</p> <p>j. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat.</p> <p>k. Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible.</p> <p>5. For projects that cannot implement the measures or avoidance buffers identified in number 4 above, site specific conservation measures will be developed in coordination with USFWS. Occupied Jones cycladenia habitats within 300 feet of the edge of the surface pipelines' ROWs, 300 feet of the edge of the roads' ROWs, and 300 feet from the edge of the well pad shall be monitored for a period of three years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the USFWS. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the USFWS.</p> <p>6. Re-initiation of Section 7 consultation with the USFWS will be sought immediately if any loss of plants or occupied habitat for the Jones cycladenia is anticipated as a result of project activities.</p> <p>Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures will be developed and implemented in consultation with the USFWS to ensure continued compliance with the ESA.</p>